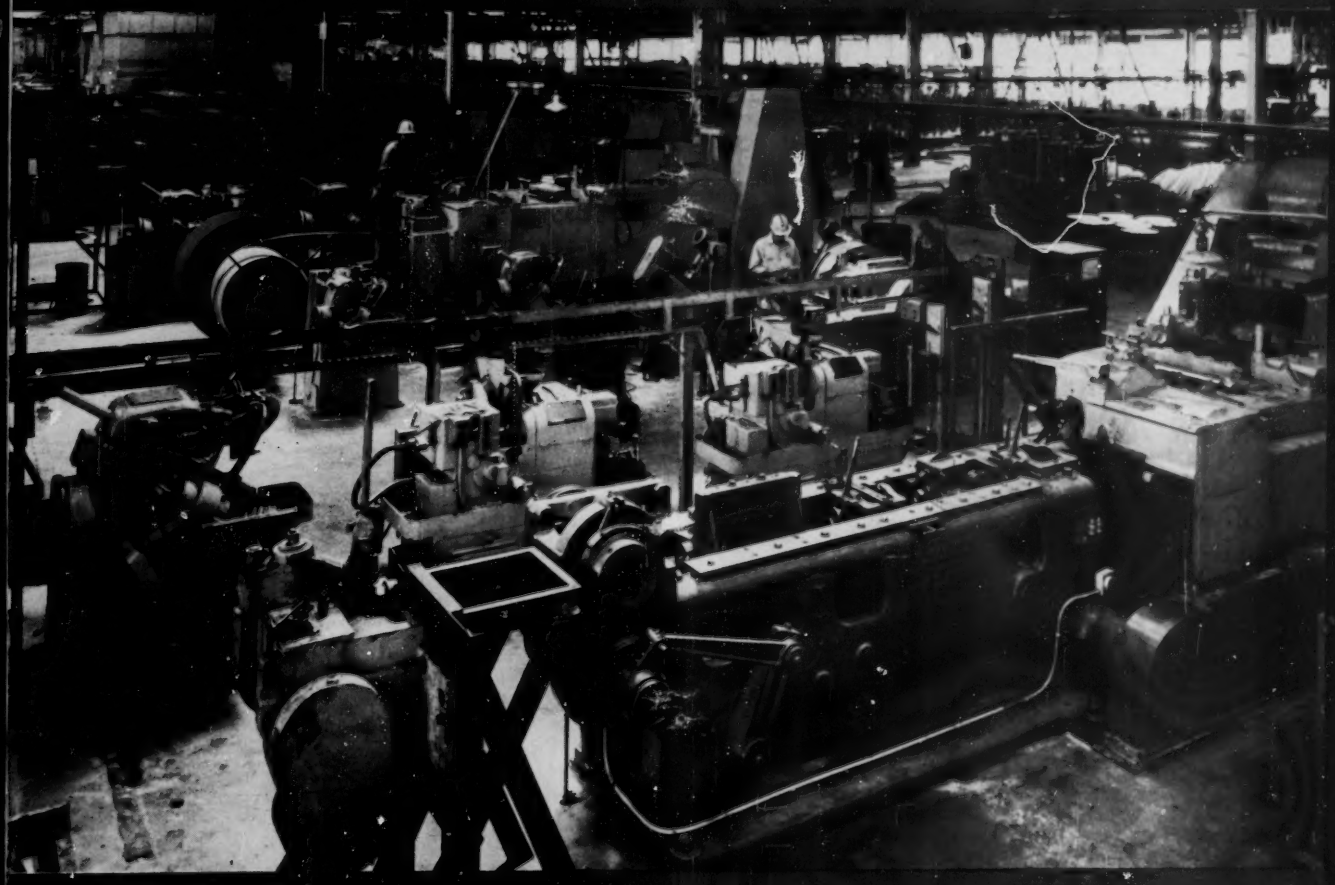
THE MAGAZINE OF

Standards



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JULY, 1959

THE MAGAZINE OF

Standards

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

VOL. 30 JULY, 1959 No. 7

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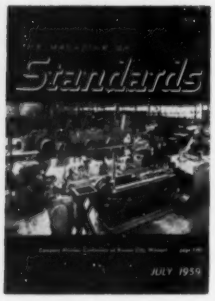

Our Cover: A visit to the Bolt and Forged Products Plant of the Sheffield Division, Armco Steel Corporation, was one of the features of the Company Member Conference Spring Meeting at Kansas City, Missouri. The process starts with the annealing of the metal rods or wire, after which they are fed to the bolt-making machines as shown in this picture.

ASA

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• ONLY RECENTLY have standards men begun to achieve the recognition that their contribution to the national economy warrants. The fact that this year's National Conference on Standards is only the tenth, and that the Standards Engineers Society's annual meeting is the eighth emphasize how short a time has passed since standards men have taken their place with other engineering groups. Today there is no lack of opportunity for exchange of ideas on standards problems.

There is the ASA Company Member Conference (the Spring Meeting is reported in this issue).

There is the National Conference on Standards, held under the auspices of the American Standards Association but having individual sessions sponsored by national associations or societies with a special interest in standards. This year's conference is in Detroit, October 20-22 (see back cover). A national conference in every sense of the word, this event represents the joint experience only possible through the cooperation of many national organizations.

There is the annual meeting of the Standards Engineers Society, the professional organization of standards men. This year it is in Boston, September 21 and 22 (see page 215). The SES announces: "In general, we intend to emphasize the question 'Why Standardization?' and to dig up some answers to it. The Standards Engineers Society is dedicated to the development and intelligent application of standardization concepts. This development and application cannot all be done **for** us; it must be done **by** us. Those who attend the SES Eighth Annual Meeting will have a chance to become pioneers in this effort."

The week of the SES meeting will be Standards Engineers Week by proclamation of the Governor of Massachusetts. The proclamation says in part: "Whereas, the Standards Engineers Society is an international professional group pledged to advance the principles of standardization, and . . . whereas, standardization vitally affects the welfare of every citizen in the Commonwealth because of its effectiveness in promoting human well-being by reducing wasteful effort . . . I, do hereby urge our citizens to join in paying special recognition to the achievements of the standards engineering profession and its members."

This Month's Standards Personality

I. H. FULLMER, pioneer in standardization and in the ABC unification of screw threads, recently was named chairman of Sectional Committee B2 on Pipe Threads. Now chief of the Engineering Metrology Section, Optics and Metrology Division, of the National Bureau of Standards, Mr Fullmer has been with the Bureau since 1917.

His work with the National Screw Thread Commission, the Interdepartmental Screw Thread Committee which succeeded it, and on unification of screw threads, gives Mr Fullmer a special claim to honor in the standardization field. He has been a delegate to all the American-British-Canadian conferences on unification of engineering standards, starting with the first (Ottawa 1945) and continuing through the most recent (London, England, 1958). He has also represented the U. S. at successive meetings of the International Organization for Standardization's Technical Committee 1, Screw Threads, from 1949 through 1958.

Mr Fullmer's interest in these activities began when, as assistant to the secretary of the National Screw Thread Commission, he edited the 1924, 1928, and 1933 reports of the Commission. In the course of his work he conducted research on stud fits on which tentative class 5 threads were based, and was unit leader in measuring and compiling data in a survey of screw thread practice in the United States. He edited NBS Handbook H25, Screw Thread Standards for Federal Services, published in 1944, and subsequent editions and supplements. He was made secretary of the Interdepartmental Screw Thread Committee, successor to the Commission, in 1945.

For nearly ten years (1936 to 1945) one of his major activities was unit leader in the calibration of tens of thousands of master precision gage blocks, largely by optical interference methods. This was the basis for development of applicable interferometry techniques.

Mr Fullmer's chairmanship of editorial subcommittees and subcommittees on nomenclature has helped to coordinate the standards developed by many of the ASA committees of which he is a member — on screw threads, pipe threads, bolts and nuts, allowances and tolerances for cylindrical parts and limit gages, and decimal-dimensioning. Because of his interest in editorial questions, it was natural that he should be chairman of a Joint Committee on Definitions set up by several of these committees and Committee Y14, Drawings and Drafting Practice. It is not surprising that he served for some time as chairman of the Federal Specifications Board Technical Committee on Bolts, Nuts, and Screws, nor that he has taken an active part since 1926 in the activities of the American Gage Design Committee. As chairman of the Subcommittee on Large Scale Metrology of the American Ordnance Association's Standards and Metrology Division, he is now investigating the commercial accuracy of measurements of large mechanical components.

Mr Fullmer is a Fellow of The American Society of Mechanical Engineers. In 1958 he received the Department of Commerce Meritorious Service Award.

He married Dorothy Ada Bate in 1921. They have two sons and three grandchildren.

Speaking at the CMC meeting: (left) R. W. Bergendoff; (center) Allen E. Heyson; (right) Charles W. Stockwell, with F. H. Bump seated at right.

The COMPANY

WHAT IS THE ASA COMPANY MEMBER CONFERENCE

Here are the General Principles as outlined in the organization's official Rules of Procedure.

The Company Member Conference consists of company and Federal agency members of the American Standards Association.

The Company Member Conference, designated CMC, is established in the ASA organizational structure. It functions exclusively in an advisory and educational capacity in furtherance of the objectives of the ASA.

The CMC provides a two-way channel, in addition to normal channels through trade and technical associations, through which company members may advance to ASA, its member-bodies and sectional committees, their views, needs and recommendations pertaining to the entire field of standardization. It further provides within ASA a channel direct to industry for use in the promotion of standards.

The CMC includes, among its basic purposes, the fostering of direct contact and association between individual company representatives. It stimulates discussion and evaluation of mutual standardization problems and promotes better Company Member knowledge and understanding of ASA procedures and standards.

The CMC meets at least once a year or oftener, as required. The affairs of the CMC are managed by an Administrative Committee which is elected by the Conference. The Administrative Committee prepares agenda, conducts meetings, arranges for preparation and distribution of minutes, and handles other management matters, as required.

A feature of the meeting was presentation of the key of the city to Vice Admiral G. F. Hussey, Jr, USN (Ret), managing director of the American Standards Association. Accompanying the key was a parchment conferring on Admiral Hussey the title Honorary Citizen "as a memorial of the high esteem in which he is held in the hearts and minds of the people of this city." Below, Kansas City Mayor H. Roe Bartle shakes hands with Admiral Hussey following the presentation.
Speakers at the conference, opposite page, left to right: D. M. Doty; John R. Townsend; Roy P. Trowbridge; C. W. Bryan, Jr

J. M. Goldsmith, chairman of the Company Member Conference, was presiding officer at CMC's Spring Meeting.

MEMBER CONFERENCE at Kansas City, Missouri

MEETING at Kansas City, Missouri, the Company Member Conference of the American Standards Association at its Spring Meeting, May 6 and 7, seriously considered the urgent problems facing standards men today. These center around the relation of standards to research, industry's attitudes toward both national and international standardization, and how teaming the relatively new technique of value analysis with the well-established techniques of standardization can give industry important savings.

J. M. Goldsmith, superintendent of metallurgy and quality control, Sheffield Division, Armco Steel Corporation, Kansas City, chairman of the Company Member Conference, was presiding officer. Members were welcomed by the Mayor of Kansas City, the Honorable H. Roe Bartle. Mayor Bartle presented the key to the city to Vice Admiral G. F. Hussey, Jr, USN (Ret), managing director of the American Standards Association, making him Honorary Citizen of Kansas City.

Standards must be incorporated into the work of research and development if they are to be accepted from the beginning in the products and processes of the future, Mr Goldsmith pointed out at the opening session. As older companies do more research and new companies begin research programs, many younger engineers are coming into the field who have had no experience with standardization, he told the CMC members. The extent of the problem is evident in estimates that expenditures for research and development will reach 10 billion dollars by 1960. Speaking on this point, John R. Townsend urged that standards be developed for the future as well as the present. Mr Townsend is special assistant to the Director of Research and Engineering, Department of Defense, and is president of the American Standards Association.[1]

"Progress is related to the ease with which the scientist can comprehend the *whole* of his discipline in its

[1] For Mr Townsend's views on "Research, Standards, and Security" see his article under this title, MAGAZINE OF STANDARDS, April 1959, page 101.

F. C. Ewert (left) spoke on standards related to research and development; Dr Gordon Utter (right) described how his company uses standards in development of pesticides.

relation to its major parts," he said. "He cannot know all of the facts. Without the paths provided by principles and standards, the miscellaneous array of partial data in his possession is meaningless.

"We must project our thinking into tomorrow, by charting the future growth of technology along rational paths. Unless the standards engineer studies the relevant trends in scientific research and development, he will be unable to keep up with the times."

There is one problem area in which standardization can contribute to both strategic and commercial strength, Mr Townsend said. That is in the complex field of reliability and durability. "Today we are calling for progressively higher levels of performance, under progressively more severe environmental operating conditions, with weapons of progressively greater cost per item, and with a decided decrease in the numbers of weapons of each type in service," he pointed out. "These trends all point to the increasing need for perfect reliability of each piece of equipment in storage, in stand-by, and in operation."

In the panel discussion that followed, Charles W. Stockwell, standards engineer, International Harvester Company, served as moderator.

There is a much faster tempo in research and development than there is in production, said Allen E. Heyson, standards engineer, General Electric Company. Therefore, a standards engineer working in research and development must study the trends to be sure standards incorporated into new products are up to date or, preferably, that they anticipate future changes that may be made. Any standard more than two years old should be checked to make sure it is up to date, he said.

Although meat processing is more of an art than a science, a substantial proportion of research and development in meat processing is concerned with standards, declared D. M. Doty, associate director, Research and Education, American Meat Institute Foundation. The meat industry is particularly concerned with public health and safety standards and with standards for packaging materials, he explained. Plastic film, which must be transparent to please the customer, must also cut out certain wave lengths of light, particularly in the ultraviolet range, in order to protect the product, for example.

The Diamond Alkali Company is concerned with development of tests and quality control methods that will obtain reproducible results, declared Dr Gordon Utter, Research Department, Diamond Alkali Company. The company produces pesticides and similar toxic materials, as well as commercial fertilizers. For testing pesticides the company has had to develop standard beetles, flies, and mosquitoes. In addition to tests to determine the effectiveness of the product, the company also develops toxicological tests to be sure any new material will not harm human beings. To bring a new pesticide up to full scale development may require research and testing to the extent of from one-half to one and one-half million dollars, Dr Utter estimated. The ASA project on Common Names for Pest Control Chemicals, K62,[2] has been a real help to the industry in obtaining standard common names for organic chemical compounds where the true chemical name is both long and involved, he said.

Standards save many hours of time and help cut the cost of research and development, which themselves are a key to future sales and profits, said F. H. Bump, standards engineer, Norton Company. A large part of the machinery being built today is either new or has been redesigned with improvements since World War II, he pointed out, and the machinery industry is therefore much concerned with research and development.

F. C. Ewert, supervisor of engineering standards, Deere and Company, believes that standards will always be closely related to research and development. In the design of automotive equipment and tractors, it is important for those engaged in research and development

[2] See "Common Names for Pest Control Chemicals" by Herbert L. Haller, THE MAGAZINE OF STANDARDS, June 1959, page 172.

At the session sponsored by the National Association of Purchasing Agents, Leo E. Carr describes investment castings. Seated are K. A. Cruise, moderator of the session, and R. M. Fletcher. On opposite page: C. W. Alexander, Jr, speaking; Z. G. Robertson and R. M. Fletcher, seated.

to know about standard components and their relation to new equipment, he explained.

There is great need for nationwide use of standard traffic signs, traffic lights, and speed limits as well as standard materials used in highway construction, said R. N. Bergendoff, consulting engineer, Howard Needles Tammen and Bergendoff. Although 40 billion dollars will be spent on the new highway system which is about to be built with Federal help, this will cover only about one percent of the total highway system in the U.S., he pointed out, and many local roads will still not be up to modern standards.

Commenting on a suggestion that perhaps there should be more standardization of automobiles to help solve the traffic problem, he called attention to a recent survey of an area of 30 acres in downtown Los Angeles. More than 50 percent of this important city space was devoted to motor vehicles, it was found, including 20 percent for streets, and additional space for parking automobiles. In Mr Bergendoff's opinion it may eventually be necessary to set a balance between the amount of land devoted to motor vehicles and land used for other purposes.

It would be impossible for this country's highly technical civilization to exist without a national standards organization, pointed out Charles W. Bryan, Jr, vice-president, Pullman, Inc, and member of the Board of Directors of the American Standards Association. If for any reason the American Standards Association should cease to exist, a new organization would have to be founded immediately to fulfill its functions, he said. Mr Bryan doubts whether the representatives of free enterprise, who have taken it upon themselves to operate a national standards organization for the U.S. are doing a good job at the present time. His paper is published in full starting on page 206.

Lack of U.S. participation in international standardization offers a threat to American industry, in the opinion of Roy P. Trowbridge, director, Engineering Standards Section, General Motors Corporation. Mr Trowbridge's paper on this subject is published on page 201 of this issue. A sure way to strengthen the hands of U.S. opponents in the international commercial conflict is for U.S. interests to turn their collective backs on the international standards program, in Mr Trowbridge's opinion. Participation can only be carried out by adequate financial support and assignment of high-caliber, well informed representatives to American and international technical committees. The decision is up to American industry, he said.

In discussion following presentation of the paper, it was pointed out that some 50 percent of production of nuts and bolts in Europe is in accordance with the Unified inch screw thread standards, and at least 99 percent of production in the USA follows this system.

As an example of lack of U.S. interest in international standards work, an ISO committee on cork was mentioned. Probably the U.S. is one of the largest importers of cork but there has not been enough interest to make it possible to send a delegation to a meeting of the committee in Spain, it was pointed out.

Standardization and Value Analysis

Sponsored by the National Association of Purchasing Agents as well as the Company Member Conference, this session, on Thursday morning, May 7, presented a panel with K. A. Cruise, material manager, Bendix Aviation Corporation, as moderator. The participants were R. M. Fletcher, assistant purchasing agent, Sheffield Division, Armco Steel Corporation; John E. Davidson, Jr, standards engineer, Bendix Aviation Corporation; Z. G. Robertson, supervisor of buyers, Bendix Aviation Corporation; C. W. Alexander, Jr, director of purchasing, National Alfalfa Dehydrating & Milling Company; and Leo E. Carr, Precision Metalsmiths, Inc.

Mr Cruise, as moderator, told how the interest of the National Association of Purchasing Agents in standardization had led to the preparation of a standardization manual in 1955. The Standardization Committee has been very active, he reported. In 1958, reflecting the close relationship that purchasing agents have found between economy, value, and standards, the name of the Standardization Committee was changed to the Value Analysis and Standardization Committee. A purchasing agent, he pointed out, is concerned with standardization as it is put to work in his own company, and is not so much interested in national and industry standards, which are the primary concern of the American Standards Association.

Urging that the purchasing department and the engineering department speak a common language and develop mutual trust, Mr Fletcher pointed out that this would help them to collaborate more effectively on the preparation of specifications and to work together more efficiently. The function of a purchasing department is to get the best service at the lowest cost, he pointed out. Since purchasing is the business of supply, management expects the purchasing department to have the necessary

The Annual Meeting of the Company Member Conference is being held during the National Conference on Standards, Sheraton-Cadillac Hotel, Detroit, Michigan, October 20-22, 1959. CMC's 1960 Spring Meeting will be in Philadelphia, May 2 and 3, at the Sheraton Hotel.

supplies on hand when needed, to exert the necessary skill in ordering economic quantities, and to run the department on an economical basis.

The purchasing department may be able to help the company's engineering department by calling attention to standard materials or standard parts not previously known to the engineer, said Mr Davidson. The purchasing agent should not restrict the engineer, but may encourage the use of standards by tactfully suggesting that a part be made from a standard material rather than from some special material, he believes.

Illustrating how standardization works in the Bendix Company, Mr Robertson mentioned the purchase of round shafting. In the past, 13 sizes had been purchased, he said. Only a small volume of each item was needed. Therefore, the items had to be purchased from warehouses. By working together, the engineering and purchasing departments had cut the 13 sizes to 6 sizes of shafting. In each case, the volume had been increased to a point that justified buying direct from the mills, at substantially reduced costs. Standardization on these six sizes also reduced the number of sizes and varieties of bearings and other tools required.

A large part of the sales dollar represents materials and supplies purchased, C. W. Alexander pointed out; therefore, each dollar saved in purchasing amounts to a real saving in the cost of the final product. He suggested five questions the purchasing agent should ask himself before making a purchase: Is it necessary? What is its purpose? Can it be cut out? If not, can it be improved? Can it be combined with something else? As an illustration of standardization in his own company he described the purchase of three-ply paper bags for packaging the product. In the past, 15 different sizes were purchased, with a separate printing for each bag for each separate product. Now, this variety of sizes has been reduced to two. Also, a single printing has been devised that is adaptable to all the products.

One of the advantages of using investment castings is the close tolerances that can be obtained, said Mr Carr. By using illustrations and models he explained the investment casting industry and showed specific cases where use of investment castings had substantially reduced the cost of the finished product. Use of this method depends upon large enough volume of identical parts to justify the cost of the original steel die, which may cost as much as $18,000, he said. The steel die is then used to make wax or plastic patterns that are expendable.

A plant tour to the Bolt and Forged Products Plant of the Sheffield Division, Armco Steel Corporation, completed the two-day meeting. CMC members who visited the plant saw how the process starts with the annealing of the metal rods or wire, after which the rods are fed to bolt-making machines, and various types of nut-making machines. The final process is the proper heat treatment or plating of the product, followed by the packaging and warehousing of the product.

"Mac" says . . .

Well known photo dealer in Lake Charles, Louisiana, asks for needed standards.

by WM. C. MCCLANAHAN

LAKE CHARLES, LA: The American Standards Association has done wonders to relieve some of the problems which confront photo dealers, but any store manager will tell you there are still countless problems to be solved.

Take, for example, the hodgepodge of connecting cords which come with the various types of projectors on the market today, and the scores of different connections to be found on remote control cables. We have power cords in stock today with ends of every conceivable size and shape. There are flat plugs, round plugs, three-pronged plugs, three-holed plugs, ad infinitum.

The problem of cords doesn't begin to come up to the problem of slide magazines. Any dealer with any kind of a stock must now carry a hundred dollars worth of magazines just so he will make sure he has a half dozen of the various types necessary to fit TDC, Airequipt, Kodak, Bausch & Lomb, Revere, Realist, etc! And if you think the dealer is confused, just imagine what it does to the consumer!

Our particular gripe, however, is the location of dates on sensitized goods. Some manufacturers seem to be in cahoots with the Commerce Department in trying to create additional employment within the camera shops of the nation by keeping expiration dates so well hidden that it takes considerable time just to keep the stock in order so that oldest merchandise will move first.

Boxes of film, boxes of paper, roll film, movie film, and paper packages have expiration dates so well hidden that it is almost impossible to find the expiration date when the stock is properly placed on the shelf; the dates are always in different locations on the boxes!

Consider cut film. On some boxes, the manufacturers put the date on the side; on others, on the back end away from the identification label; on some boxes, it is on the bottom, and every box has to be moved so that the date location can be discovered before new stocks can be put on the shelves.

We think that the ASA group has made a splendid start, but there is room for improvement!

Reprinted from *Photo Weekly*, March 30, 1959, by special permission.

LACK OF PARTICIPATION IN INTERNATIONAL STANDARDIZATION

A Threat to American Industry

by ROY P. TROWBRIDGE

MR TROWBRIDGE is director of the Engineering Standards Section, General Motors Corporation. He is chairman of Subcommittee 11 on International Cooperation of Sectional Committee B1, Standardization and Unification of Screw Threads. He is also a member of the Standards Council of ASA, the Committee on Procedure, and the Graphic Standards Board.

This paper was presented at the Spring Meeting of the Company Member Conference in Kansas City, Mo.

THE STANDARDS that we use in this country today have, for the most part, evolved as company standards. These company standards may have been formulated in any one of a number of ways. For example, the standard may begin as a proprietary item which a particular manufacturer offers to the consumer or to the rest of industry, or the company standard may be the composite thinking of a number of divisions within a company and may represent a compromise of a number of past designs which, after standardization, will move forward as a single design. The company standard may actually follow national standardization; however, this last does not destroy the company standard's place as the foundation of the entire standard pyramid inasmuch as it is not until a national standard is recognized by the individual companies that the national standard becomes anything more than a piece of paper.

As our national economy has become more complex, companies through the medium of industrial associations or professional and technical societies have carried the company standardization programs one step higher on the standards pyramid to the level of industry standards. One might ask why the intermediate step of industry standards? Why not go immediately to national standardization? The answers are really quite simple. In many instances only a single industry is interested in

the subject under consideration and it would be a waste of time and effort to solicit participation outside the particular industry. In other cases it is essential in arriving at a truly national standard to assess accurately the position of entire industries and this can be done only through the industry standards programs.

For the most part, up until now the ultimate end of standardization on a subject or item having interest in more than one industry has been national standardization which, in the U.S., is under the auspices of the American Standards Association. Most of those engaged in standardization are fairly familiar with the democratic processes by which consensus decisions are reached in ASA activities.

Thus we see that American commercial standards have not been handed down from an ivory tower by a group of "super-standards-developers" but have grown, as it were, like Topsy. At each succeeding step they have been molded and shaped, taking into consideration the past but with a view to the future. The efficiency of this process has been questioned by some who point out that this democratic process is time-consuming and leads to discarding of many of the building-block standards which fall by the wayside during the shaping process. They ask why it wouldn't be better to start out immediately with a good national standard. The ones who ask this question fail to take into consideration what makes a *good* standard.

I would define a good standard as one which is practical from the standpoint of design, manufacturing, inspection, and function. To my mind, it is virtually impossible to determine the practicability of a standard from the point of view of manufacturing, inspection, and function without a lengthy background of experience, and this background is provided only through the trial-and-error process.

The scope of our standardization program has been generally satisfactory for the past, but what of the future?

The rest of the world is making rapid forward strides in manufacturing. Ernest R. Breech, in a recent article in *Automotive News,* observed:

"As a manufacturer of automobiles, I was most impressed by the really striking improvement throughout Europe in the design, manufacturing, and merchandising of automobiles and consumer durable goods."

From our daily newspapers and weekly news magazines, we are fully aware that the Asiatic countries are increasing their manufacturing enterprise at a greatly accelerated rate. Behind the Iron Curtain, Nikita Kruschev has said:

"We declare war upon you in the peaceful field of trade. We declare a war we will win over the United States. The threat to the United States is not an ICBM, but in the field of peaceful production. We are relentless in this and we will prove the superiority of our system."

There can be no doubt but that the peoples of the world have awakened to the fact that their standards of living can be vastly improved by increased manufacturing enterprise. In some instances this manufacturing enterprise is one in which we are cooperating and aiding; however, in the instance of the Iron and Bamboo Curtain countries, it is their stated aim to "bury us."

In any event, I believe it is quite obvious that in the future the U.S. will not enjoy the percentage of world manufacturing enterprise that it previously enjoyed. I do not take this to mean that the U.S. is standing still or retreating,—no, we, too, are increasing our gross national product but at a somewhat slower rate than the rest of the world. Remember that the others started from a much lower level at the end of World War II. With our increased national production there is an ever increasing consumption of our domestic raw materials which makes it necessary for us to import raw materials in ever greater amounts; and if we are to gain and hold on to our friendly world allies we cannot shut our ports to the manufactured goods of those allies. It will therefore be necessary to look for increased export of our manufactured goods if we are to maintain the favorable balance of trade which is so vital to the betterment of our own living standards.

A factor of growing importance in gaining acceptance of American goods outside the U.S. is the conformance of the goods to the standards of the countries into which the goods are being shipped. Countries other than the U.S. have become very international-standards minded and, at every opportunity, are implementing ISO recommendations as the national standards for their own manufacturing, or for acceptance of goods which they import. Items which do not conform to the foreign countries' national standards may not be found acceptable for use in those countries, either by popular resistance or, in some instances, by national legislation.

An article which appeared in the June 30, 1958 issue of *Time Magazine* tells of instances where U.S. industry has been hurt due to lack of participation or interest in international standards activities.[1]

To put it bluntly, the threat to American industry by non-participation in international standardization is just as real as a quotation price which is 50 percent higher than the next highest bidder. The prospective buyer just does not buy.

What can the U.S. do to remedy this situation? A quotation from *Time Magazine* states:

"Since U.S. industrial technology leads the world, many nations could easily be persuaded to adopt U.S. standards as international, thus open up new markets for U.S. products."

The article goes on, however, to give the true state of affairs.

"But while U.S. businessmen have dallied, the world has not waited. Great Britain, France, and The Netherlands have taken the lead in standards setting, and even Russia has participated in one-third more standardization conferences than the U.S. Young industrial nations are already finding it easier to adopt British, French, or

[1] For text of article, see MAGAZINE OF STANDARDS, August 1958, page 234.

even Russian rather than U.S. standards. In the last ten years, India has adopted some 1,000 national standards; most were British, only a few American.

"U.S. industry has not even taken the trouble—or spent the money — to have its 1,700 national standards translated for use in foreign countries. In Latin America, where the U.S. is the biggest trader, few standards exist. But it is European businessmen instead of U.S. firms who are translating their standards into Spanish and Portuguese in a drive to grab a bigger slice of its growing market."

It would therefore appear highly desirable for U.S. to participate in ISO on a steady basis, particularly in those fields that hold promise of large export potential or where we are currently the leading producer. In this way, American Standards can be brought officially to the attention of the international organization and our standards may often become the international standards. Such participation could undoubtedly have some effect on our own American Standards (it would be foolhardy to say that our standards are perfect); however, if we were to take the initiative, such changes could be comparatively minor and would undoubtedly be beneficial to all concerned.

There are a number of problems connected with greater U.S. participation in the international standards activities. The foremost of these is insufficient interest on the part of industry to support adequate technical representation on the ISO technical committees.

Participation in the ISO by other countries is largely financed by the individual governments. Formation of the national standards in foreign countries is also underwritten by the governments. Not so in the USA. The democratic tradition passed on to us by our forebears has been, and will continue to be, the basis for U.S. industry. The comparative freedom enjoyed by business from interference by the State has been beneficial to all of us. The American concept of standardization, like the businesses which it serves, also evidences its democratic origins in its freedom from governmental control. We in industry do not want, nor should we encourage in any way, American standardization by government subsidization. It follows, then, that we should not look to the U.S. government to pick up the bill for international standards cooperation. This leaves the problem of funding right at the doorstep of industry.

This difficulty could be overcome on an equitable basis if trade associations and technical societies would assign funds specifically earmarked for the purpose of ISO participation. The use of such funds would be governed by the directors of such trade associations, or technical societies and paid out for the purpose intended on solicitation by the appropriate American technical committee after the directors have reviewed the need for participating in a particular session. In many instances, more than one technical society or trade association is interested in the subject at hand. In these cases, the financing of participation could be worked out jointly between the sponsoring bodies, depending on the degree of interest. Such funds could also be swelled from time to time by individual company support, which would, of course, depend on the importance of the ISO program to the company making such donation.

Another problem standing in the way of greater U.S. participation in international standardization is the opinion held by some that by such participation we are giving away U.S. "trade secrets." It should be made clear that in the majority of the ISO deliberations the term of reference on which the American representative operates is the existing American Standard or, if no American Standard exists, a nationally recognized industry standard or practice. These standards and practices are and will continue to be available to any foreign country which might wish to have its embassy or agent procure them from the original source. Furthermore, in formulation of ISO recommendations the deliberations of the technical committees are not concerned with proprietary design, manufacturing or trade secrets but are primarily concerned with the national consensus as presented by a country's representative and with the technical arguments supporting the positions.

A third difficulty is the misconception on the part of many that participation in an ISO activity will lead automatically to revision of our national standard. This will occur only where it would appear profitable for us to make such revision. As has been mentioned before, if the U.S. will take the initiative in developing standards in the international field there is a strong probability that our standards will be accepted with little or no alteration. Contrariwise, lack of participation will lead to revision of or deviation from American Standards in all of those cases where the foreign viewpoint has been allowed to jell on standards for those goods with which we hope to enter into world trade. In these cases, if the amount of export exceeds the domestic consumption, there will be a very strong motive for dropping the American Standard in favor of the ISO. This could be very costly in the overall U.S. industrial picture.

Lastly, there is a strong fear that participation in the ISO will sell short the inch; that is, will promote adoption of metric-conceived standards and thereby upset the measurement system of our country. This is not so. Inch-conceived standards are as readily acceptable in the ISO as metric. In standards based on dimensions, where tolerances allow, it is even possible to obtain a common standard, sizes for which can be expressed in either metric or inch units. Lack of participation, however, will most surely lead to almost complete development of ISO standards on the metric system. In most foreign countries, outside of the British Commonwealth nations, the metric system is recognized as *the* standard, and inch-dimensioned standards are used only when such standards are not available in metric units. Without U.S. support, the British Commonwealth would be hard put to gain acceptance of inch-conceived standards in the ISO. In fact, a committee of the British Association for Advancement of Science is today studying the pros and

cons of converting British weights and measures to the metric system and this committee's recommendations will, no doubt, be given serious consideration by British industry. Manufacturing interests in America do not favor any change in the present measurement system inasmuch as the cost of such conversion would be on the order of 10's of billions of dollars, to say nothing of the lengthy and costly confusion which would exist for many years after initiating such a change.

Up until now, the U.S. has taken the lead in developing nine world standards. The U.S. has not participated at all in 58 of the 142 draft recommendations now being considered by ISO. In his article in the December 1958 issue of THE MAGAZINE OF STANDARDS, Cyril Ainsworth observes:

"International standardization is a live subject, of growing significance and importance to the United States. As the authoritative channel for communication in international work, ASA therefore is the organization with which all who are interested in international standardization should be thoroughly familiar.

"In no respect does ASA depart in this work from its basic principles or from its constitutional prohibition against the formulation of standards. Organizations in the United States concerned with international projects use ASA in international work in the same way that they use ASA machinery for the development and approval of American Standards. The basic consensus principle of ASA is applied to international work in the same way as to national activities. All other fundamental principles on which ASA procedures are based are directly applied in international activities."

Thus we see that U.S. industry does have an open line by which it can communicate its views on standards to the rest of the world. It appears, however, that with no view of immediate profit or unless it is in immediate trouble, U.S. industry is unwilling to invest the comparatively small amount of money and talent it would take to turn the open line into a live wire. Knowing this lack of management support, technical committees to which ISO proposals are referred have as often as not declined participation on the grounds that such participation would be fruitless without adequate representation. In these cases it is extremely difficult to get an authoritative American technical opinion on ISO proposals.

Some American technical groups have, however, participated actively in promoting their viewpoints and they have generally found a common meeting ground with representatives of other countries in coming up with ISO recommendations. These American activities have established committees which are responsible for maintaining a constant liaison in international standards activities. Being kept up to date, these "International Relations" committees are ready to provide a representative American opinion when required and they have been instrumental in initiating new ISO recommendations.

In the past, we have lost splendid opportunities to gain international adoption of existing American Standards by failing to participate in international standardization activities. A prime example of this is screw thread standardization which, until just recently, was headed toward complete metric screw threads for international standards. Strong representation by Great Britain, Canada, and the U.S. has temporarily stalled this drive. It is now conceded, however, by those who promote the metric threads that had the U.S. presented the American Standard threads as proposed international standard threads immediately after World War II the U.S. threads would have become the world standard.

It is my belief that a sure way to strengthen our opponents' hands in the international commercial conflict would be to turn our collective backs on the international standards program. Under these conditions, if we are to compete in foreign trade, we will be required to operate uneconomically on two standards in this country or face the more costly problem of converting to a foreign standard. Participation can only be carried out by adequate financial support and assignment of high-caliber, well-informed representatives to the American and International technical committees.

The decision is up to American industry.

U. S. Participation in ISO Projects

The American Standards Association, which is the U. S. member of the International Organization for Standardization, holds the secretariat for eight of the 91 ISO technical committees, and actively participates in 37.

U. S. Holds Secretariat

TC No.	*Title*
11	Unification of boiler codes
26	Copper and copper alloys
28	Petroleum products
36	Cinematography
42	Photography
61	Plastics
66	Determination of viscosity
85	Nuclear energy

U. S. Active Participation

TC No.	*Title*
1	Screw threads
4	Ball and roller bearings
12	Quantity, units, symbols, conversion factors and conversion tables
19	Preferred numbers
22	Automobiles
23	Agricultural machines
24	Sieves
25	Cast iron
27	Solid mineral fuels
29	Small tools
30	Measurement of fluid flow
33	Refractories
35	Raw material for paints, varnishes and similar products
37	Terminology (Principles and coordination)
38	Textiles
39	Machine tools
41	Pulleys and belts (including V-belts)
43	Acoustics
45	Rubber
46	Documentation
48	Laboratory glassware and related apparatus
50	Lac
56	Mica
58	Gas cylinders
62	Sheet and wire gages (designation of diameters and thicknesses)
67	Materials and equipment for the petroleum industry
69	Statistical treatment of series of observations
73	Marks indicating conformity with standards
75	Stretchers and stretcher carriers
76	Transfusion equipment for medical use
78	Aromatic hydrocarbons
79	Light metals and their alloys
80	Safety colors
81	Common names for pesticides
84	Syringes for medical use and needles for injections
86	Refrigeration
91	Surface active agents

U. S. to be kept informed of progress of work (observer status)

TC No.	*Title*
2	Bolts, nuts, and accessories
3	Limits and fits
5	Pipes and fittings
6	Paper
7	Rivets
8	Shipbuilding details for sea navigation
9	Shipbuilding details for inland navigation
10	Drawings (general principles)
13	Shaft heights of machinery
14	Shaft ends
15	Couplings
16	Keys and keyways
17	Steel
18	Zinc and zinc alloys
20	Aircraft
21	Fire-fighting equipment

U. S. to be kept informed — continued

TC No.	*Title*
31	Tires, rims, and valves
32	Splines and serrations
34	Agricultural products
44	Welding
47	Chemistry
51	Pallets for unit load method of materials handling
52	Hermetically sealed metal food containers
53	Packages for frozen foods
54	Essential oils
55	Resinous lumber (sizing, defects)
57	Surface finish
59	Building construction
60	Gears
63	Screw threads for glass containers and closures
64	Methods of testing fuel-using equipment
65	Manganese ores
68	Standardization in the sphere of banking
70	Definitions of engines and machines
71	Concrete and reinforced concrete
72	Textile machinery and accessories
74	Hydraulics binders
77	Products in asbestos cement
82	Mining
83	Gymnastics and sports equipment
87	Cork
89	Fiber and building board
90	Apparatus for testing milk and milk products
92	Fire tests on building materials and structures
93	Methods of analysis and examination in the field of starch, its derivatives and by-products

ISO Committees Plan Fall Meetings

Of the ISO technical committees in which the American Standards Association is taking an active part, the following have scheduled meetings for the latter part of this year:

ISO/TC No.	*Title*	*Place*	*Date*
76	Transfusion equipment for medical use	London	September 14-16
39	Machine tools	Paris	September 23
4	Ball and roller bearings	Berlin	October 5-10
19	Preferred numbers	Varvosie	October 13-15

ISO/TC 28, Petroleum products, for which the American Standards Association holds the secretariat, met in New York June 8 and 9. ISO/TC 61, Plastics, for which the American Standards Association also holds the secretariat, is planning a meeting for October 26-31 in Munich, Germany, although plans are not definite as yet.

The WHEREFORE and the WHEREWITHAL

by CHARLES W. BRYAN, JR

Vice-President, Pullman, Inc; Member, Board of Directors, American Standards Association

A CENTURY AGO each manufacturer made his own sizes, types, and compositions of products and sold them without being very specific about their properties. There were no widely accepted standards for any product. A passage from a business letter written in 1869 illustrates this point. The letter was from a buyer of silicates in Trenton, N. J., acknowledging the latest shipment from his supplier. It reads: "The liquor appears very good to the eye, though from the taste I think that there is an excess of alkali present." This quotation leads us to wonder by what test methods sulfuric acid was judged in those days.

The classic example of standardization is Eli Whitney and his musket. He achieved complete interchangeability of parts and thereby reduced his production costs. It improved his profits and created a great convenience for all owners of muskets. The benefits of standardization became apparent to other manufacturers and that is a point that should be stressed—the profitability of standardization.

The example of what Eli Whitney did is an example of standardization by an individual company.

The national engineering societies were the first to realize that company standards were not enough. To

make practical and profitable use of the many new discoveries and inventions of the age, standards were needed that were acceptable within one branch of engineering or throughout one industry. The American Institute of Electrical Engineers, for instance, took a leading role in the development of early electrical standards.

Every national engineering society soon found itself involved in standardization in one way or another. Trade associations also entered the field of standardization, recognizing that standards promised to promote business. Insurance underwriters and safety organizations became concerned with safety standards.

Today, according to a recent report of the National Industrial Conference Board, more than 500 organizations are engaged in standards work. In addition, there are many government agencies writing their own standards and specifications.

Now if so many are aware of the need for standardization, the question may be asked: "Wherefore—Why do we need the American Standards Association?" These organizations must know the answer, because many of them support ASA.

During the early standardization efforts of these groups, it soon became apparent that many of the needed standards would cut across industry lines and overlap traditional technical fields. For instance, electric motors are made by the electrical industry, but practically every other industry in the country uses them, so there is a natural desire among the users to be consulted when standards for motors are developed. There are many such instances.

That is why we all need an American Standards Association, which fortunately is a going concern. Every industrial country needs such an organization. It provides a neutral meeting ground and an impartial judicial service for the development of national standards acceptable to everyone concerned—to engineers, producers, consumers, government agencies, safety authorities, insurance underwriters, and many other groups.

There is a further practical need. With increasing international trade and exchange of technological know-how, we have a growing need for international standards. These are being developed through the two main international standards organizations — the International Organization for Standardization (known as ISO) and the International Electrotechnical Commission (known as IEC). The individual nations are represented on these two bodies through their national standards organizations. The industrial and economic interests of the United States are represented, of course, by the American Standards Association. [For a discussion of U.S. participation in international standards work, see page 201.]

These two reasons alone make it clear that it would be impossible for our country's highly technical civilization to exist without a national standards organization.

This paper was presented at the Spring Meeting of the Company Member Conference, May 6 and 7, 1959, at Kansas City, Missouri (*see page* 196).

[*The chart on page* 208 *shows how ASA is set up to administer the impartial judicial service referred to by Mr Bryan. In each of the major fields of activity a Standards Board is responsible for supervising and giving leadership and guidance for the work of sponsor organizations and standards-making committees organized under the procedures of the American Standards Association. The Standards Council, composed of representatives of the Association's Member Bodies, has final authority on all questions concerning initiation, development, and approval of American Standards, but has delegated authority on these matters to the Standards Boards and on approval of standards to a Board of Review. All questionable cases are referred to the Council itself for action. Questions on procedures have been delegated by the Council to a Committee on Procedure whose recommendations are presented to the Council for final decision. ASA's Board of Directors is responsible for policy, administration, and financial matters. The staff is a service organization that assists in carrying out the policies and procedures set down by the Board and the Council, and which also services sponsors and Standards Boards.*]

If we had no ASA today, or if ASA should for any reason cease to exist, a new organization would have to be founded immediately to fulfill its functions.

The suggestion that ASA might cease to exist may seem far-fetched, but it could happen. The existence of ASA is by no means something we can take for granted. Its effective existence is threatened constantly — and that brings up our second aspect of ASA: "Wherewithal, or how do we maintain ASA?" The discussion of that phase suggests two further questions:

"By what means should the standards organization of the United States exist?" . . . and

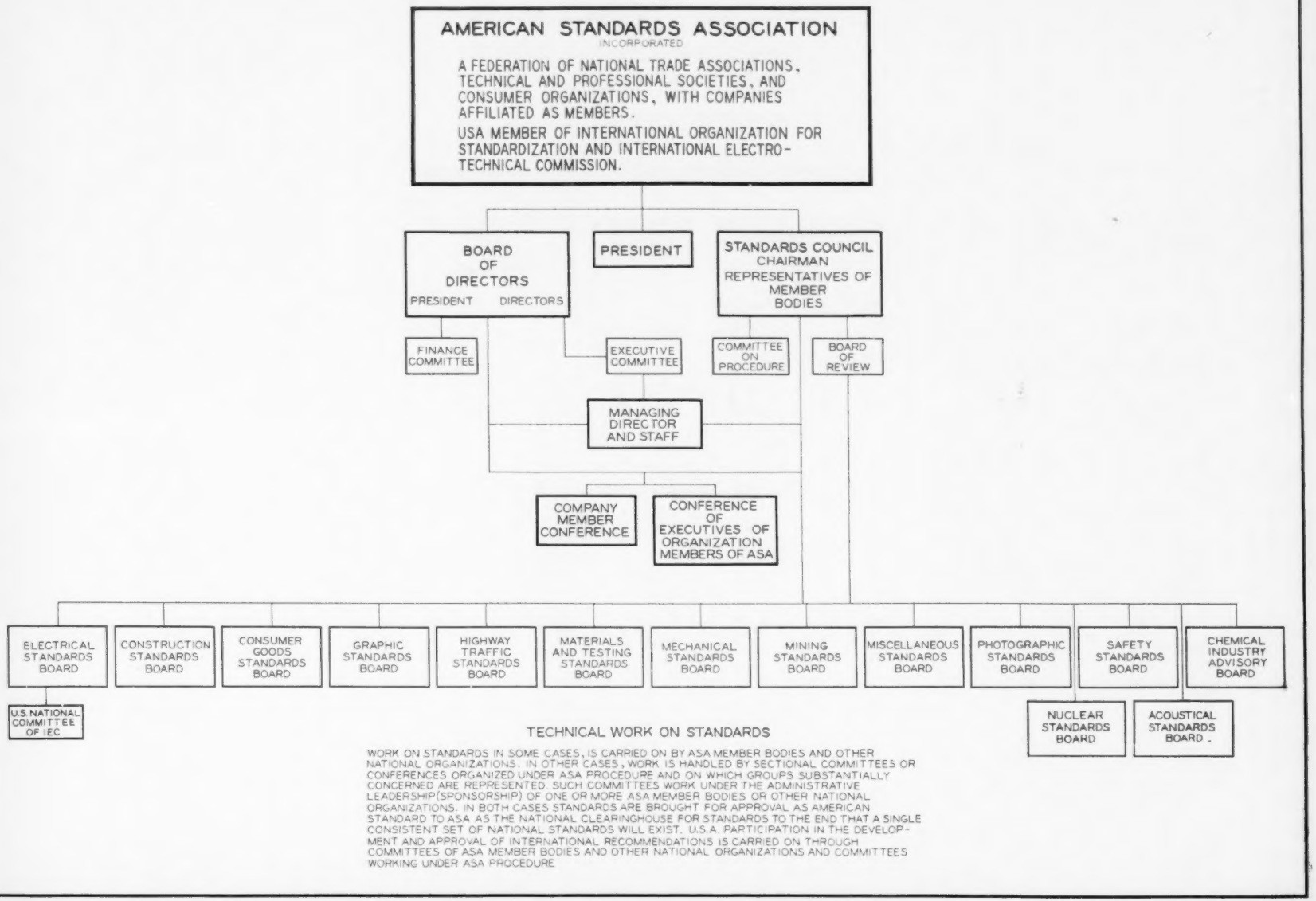
"By what means should the standards organizations of other nations exist?"

There are 40 national standards organizations participating in ISO, the international organization for standardization, and there are others that are not ISO members. How are they supported in their respective countries?

In countries with highly centralized governments, the national standards organization is a government department, fully supported by government funds. This is the case in all iron curtain countries, and in some of the free nations that have just begun to industrialize.

In most traditional industrial countries, the national standards organization is a partnership between government and private industry. The British Standards Institution, for instance, has a royal charter, and for its financial support the government matches each pound sterling provided by private industry with a pound sterling of government funds — up to a set limit. Many other countries have a similar arrangement.

The Federal Government plays no part in the financing of the American Standards Association.



TECHNICAL WORK ON STANDARDS

WORK ON STANDARDS IN SOME CASES, IS CARRIED ON BY ASA MEMBER BODIES AND OTHER NATIONAL ORGANIZATIONS. IN OTHER CASES, WORK IS HANDLED BY SECTIONAL COMMITTEES OR CONFERENCES ORGANIZED UNDER ASA PROCEDURE AND ON WHICH GROUPS SUBSTANTIALLY CONCERNED ARE REPRESENTED. SUCH COMMITTEES WORK UNDER THE ADMINISTRATIVE LEADERSHIP (SPONSORSHIP) OF ONE OR MORE ASA MEMBER BODIES OR OTHER NATIONAL ORGANIZATIONS. IN BOTH CASES STANDARDS ARE BROUGHT FOR APPROVAL AS AMERICAN STANDARD TO ASA AS THE NATIONAL CLEARINGHOUSE FOR STANDARDS TO THE END THAT A SINGLE CONSISTENT SET OF NATIONAL STANDARDS WILL EXIST. U.S.A. PARTICIPATION IN THE DEVELOPMENT AND APPROVAL OF INTERNATIONAL RECOMMENDATIONS IS CARRIED ON THROUGH COMMITTEES OF ASA MEMBER BODIES AND OTHER NATIONAL ORGANIZATIONS AND COMMITTEES WORKING UNDER ASA PROCEDURE

Three Federal Government departments — Commerce, War, and Navy — were among the co-founders of ASA in 1918. And during World War II, when uniform industrial standards were among the most vital factors in the defense of our country, ASA performed contract services for the government.

After World War II, it was re-established as a private-enterprise organization. It was incorporated under the laws of the State of New York, and because of some fine legal points, all Federal Government agencies — ten of them — withdrew from ASA in 1948.

Today, no Federal Government agency is represented on any of ASA's policy-making or administrative committees. ASA, of course, has never had a Federal charter. And it receives not a penny of government money. ASA's support comes entirely from voluntary membership fees and sale of published American Standards.

There are a number of possible good reasons why, in a free-enterprise society such as ours, a partnership in the United States between government and industry is not the solution to the problem of establishing standards. We don't have a long tradition, such as other nations have, of government participation in industrial and economic matters. Whenever free enterprise can do a job, that job is usually left to free enterprise. If we, as representatives of free enterprise, have taken it upon ourselves to operate a national standards organization, then we had better do a good job of it.

At present we are not doing a very good job. The need for more ASA funds is as great as ever. ASA income has gone up steadily over the years and so have operating expenses. Two familiar factors cause this permanent upward trend in expenses. One is the inflationary tendency of costs and the other is ASA's ever-increasing work load.

It is only prudent on the part of ASA to expect further inflationary increases in costs in future years. Most company budgets reflect such an expectation. Even with a completely unchanged level of operation, ASA would have to expect to pay a higher wage bill, higher rent, and higher prices for all the supplies and services it buys to conduct its business.

Yet ASA cannot expect its work load to remain unchanged. By projecting its past growth, we can see a steadily growing work load for ASA. Today there are more than 400 projects on ASA's books, and the list continues to grow. There are thousands of experts from industry, government, and technical groups working on these projects, and they look to ASA for prompt and efficient staff work. Increased work load requires increased staff, or the staff work will be neither prompt nor efficient.

As for our international obligations, ASA participation in ISO projects often compares unfavorably with the work of other nations. Several smaller countries hold more project secretariats. On those projects for which we hold the secretariats, our work often suffers for lack of funds.

Compared to the national standards organizations of many other leading countries, ASA often looks like a very poor relative. The United States is expected to be the leader in the industrial and economic development of the free world. We have accepted that leadership, generally speaking, with the realization that it is in our own best interests. It is just as much in our own best interest to accept leadership in international standards work.

ASA's obligations, both national and international, are clearly defined. It must be in a position to handle promptly and effectively any national standards project that is submitted to it. And it must be able to represent the United States adequately in international standards work. Because of its chronic shortages of funds, ASA can do neither at present.

To do its work properly, ASA needs more staff — both technical and administrative; it must modernize its office equipment and methods; and it needs more travel funds for international representation.

ASA has no financial reserves to cushion setbacks; it runs a small but more or less permanent deficit. Deficits are not unknown to churches, hospitals, and private universities, but in an organization so vital to industrial health, it is a bit shocking. A serious drop in ASA income can put ASA out of business. It would severely damage the voluntary standards movement in this country, and wreck 40 years of painstaking work.

Unfortunately, the people who participate in national standards work are not always the same as the people who have the final say-so about paying for national standards work. In other words, many engineers and purchasing agents are ardent supporters of national standardization, but the financial support has to be approved by top management, by treasurers or comptrollers, or by contribution committees.

It is on the financial management level that most of the misunderstanding about ASA support occurs. It is on this level that ASA membership fees are often regarded as charity contributions. It is on this level that education on ASA services is needed most.

ASA support is a business expense for valuable services rendered, and no one is better qualified to inform those who approve support for standards work than those who participate in standards work.

It is a matter of company self-interest. Eli Whitney standardized the parts of his muskets so that he could produce them more economically. He found standardization profitable. Every standards man can cite an example of how standardization has proved profitable for his company.

Misunderstanding of the work is standardization's worst enemy. Many take refuge in the belief that standardization ties manufacturers to the past, yet nothing is more false. Concentration on a standard product produces significant research for continued improvement of the standard. Only the standardized products continue to improve, provide the most favorable selling prices, reduce funds tied up in inventory, and contribute to universal improvement of operations.

This is the twenty-second installment in the current series of rulings as to whether ***unusual industrial injury cases are to be counted as "work injuries" under the provisions of American Standard Method of Recording and Measuring Work-Injury Experience, Z16.1-1954. The numbers in parentheses refer to those paragraphs in the standard to which the cases most closely apply. These cases are issued periodically by the Z16 Committee on Interpretations.***

Case numbers in the current series start with 400. Cases 400-500 have been reprinted with an index prepared by the National Safety Council. To make it easy to locate all cases applying to any section of the standard, the index is arranged numerically both by paragraph number of the standard and by case number. Each index reference includes a brief description of the case. Reprints are 75 cents per copy, available from ASA.

Sectional Committee Z16 is sponsored by the National Safety Council and the Accident Prevention Department of the Association of Casualty and Surety Companies.

Are These Cases Work Injuries?

CASE 644 [A1.6 (h)]

During their regular lunch period a group of logging employees were gathered around a fire built on the hillside in an area to be logged. It had been raining, and a chokerman and another employee were sitting under an uprooted stump to get out of the rain. A sudden hard rain occurred and evidently loosened the dirt under the stump which suddenly rolled down hill onto the chokerman, causing injuries to his spine and ribs. It was common practice to work in the rain in this area, and eight experienced men failed to see the hazard of sitting under the stump.

Decision: The committee decided that this injury should be included in the work injury rates because it arose out of a hazard of the work area, thereby being reportable under paragraph A1.6 (h).

CASE 645 [A1.6 (f)]

At his regular scheduled lunch time a jitney driver drove the jitney from his regular place of work to the time clock. He punched out and left the plant to eat lunch. On his return he punched in before his lunch time was up, and got on the jitney to drive to his work place. On the route back to his work place the jitney struck a skip and caused the steering wheel to whip out of his hand. The spinner knob of the steering wheel struck the back of his hand, breaking a bone and resulting in time lost from work.

Decision: The committee decided that this should be considered a work injury and included in the rates on the basis that the injury occurred on company property during travel from the entrance to the work place.

CASE 646 [1.5 (b)]

An executive of the company had attended a regular weekly luncheon of a civic club of which he was a member, his dues being paid by the company. After the luncheon, as the employee was entering his automobile which was parked on the street, his left index finger was caught in the car door, causing a compound fracture.

Decision: The committee decided that this injury should be included in the work injury rates. The members believed that since the company had paid this employee's dues at the civic club, it was probably considered as good public relations for the employee to attend such functions, and therefore he should be considered as having been in the course of employment at the time of the injury.

CASE 647 (5.1)

A warehouseman complained of feeling sick to the stomach as well as of having pains in the groin region. He was taken to the hospital for an examination, after which he was released to go home with the suggestion that he call his family physician.

Investigation of his activities engaged in during the day revealed that this employee was performing the normal job duties of a warehouseman. He himself believed the pains in his groin began a short time after he was filling a light shipment of reading material for the company's advertising department. This involved climbing from the floor elevation, reaching to get the light materials to be packaged and returning to the ground floor. Immediately thereafter there was no symptom of pain. However, about 2½ hours later the pain increased to the extent that the employee was taken to the hospital.

The employee had been operated on for a bilateral hernia condition more than 10 years previous. According to his family physician, this was a gradual recurrence of the previous hernia.

Decision: The committee decided that this hernia should not be included in the work injury rates because the members

did not believe this case met the conditions of paragraph 5.1.

Cases 648-667 (5.16)

These were 20 cases submitted by a single organization, all of which involved heart disease of undetermined origin. The Committee on Interpretations agreed that paragraph 5.16 of the standard applied to all of these cases. Therefore, the cases should be counted, if in the opinion of the attending physician engaged or authorized by the employer the illness arose out of, or was aggravated by, the victim's work.

Case 668 (5.15)

An employee, while pulling on a pipe wrench, slipped and fell to the floor, landing on his left wrist. Diagnosis by the company doctor disclosed a minor sprain to the wrist, and the man continued to work at his normal job.

During the next several weeks a knot slowly appeared on the ulnar side of the metacarpal area of the left wrist. The employee consulted a specialist who diagnosed the knot as a ganglion cyst, not related in any way to the sprain or the accident. On the basis of this diagnosis, surgery was performed 10½ weeks after the injury. Instead of finding a ganglion cyst, the specialist found contusions and lacerations to the fibrous tissue and periosteum over the capitate bone. At this time the specialist stated that surgery would not have been indicated for this condition.

It was the opinion of both the company doctor and the specialist that had the injury been properly diagnosed no surgery would have been performed, and the employee could have continued his normal work. Both further concluded that there would be no permanent partial disability involved.

Decision: The injury should be considered a disabling one, and should be included in the work injury rates, on the basis that it was a non-disabling injury aggravated to the extent that disability resulted because of improper diagnosis.

Case 669 (5.18)

A railroad trackman was holding up the end of a railroad tie with a bar while his co-worker drove in a spike. The workman driving the spike hit a glancing blow, and a fragment of metal from the spike hit the trackman in the eye. The employee was wearing his spectacle-type safety goggles. The fragment passed between his cheek and the goggles, resulting in a moderately severe hematoma.

The injured employee was taken to the local company clinic, where he was examined and referred to an eye specialist. After visual examination, the specialist advised an x-ray examination. This was done, and no foreign object could be seen. The specialist medicated the eye, and told the employee he could return to work the following day. Upon dismissing the employee, the specialist warned the man that he could expect some degree of pain, and told him to return for re-examination in two days.

On the day following the injury, the trackman reported for work. He went to the doctor at the local clinic, requesting that he be sent to another specialist. The doctor at the clinic told him to keep his appointment with the specialist he had already seen to determine whether the services of another specialist were needed. The employee did not return to work after his visit to the clinic, contending that he was in too much pain. However, he did keep his appointment with the eye specialist who discharged him as requiring no further treatment and with the statement that the injury was non-disabling.

The employee then went to the chief surgeon of the company, who suspended him for one week, effective the day of the injury, with the explanation that the employee was in some pain, and it was poor employee relations to return an employee to work with a badly bloodshot eye. The man returned to work one week after the injury.

Decision. This injury should be considered as a temporary total disability, and included in the work injury rates on the basis that the chief surgeon of the company had stated that the employee should be away from work for one or more days. He had the final medical authority in the company, and his decision should override the decision of the doctor who had actually treated the case.

Case 670 (1.6)

A company questioned the inclusion of injuries occurring on board ship while employees are off duty. The Company Marine Department had several such injuries occur which arose from the environment of employment in that they would not have occurred had the employees not been on board ship. However, since paragraph 3.2.1 excludes off-duty hours in the calculation of exposure, the company wondered whether injuries occurring off-duty should likewise be excluded, even though they may have arisen from the work environment. As an example, the company cited the case of a messman who, while off watch, was walking aft on the catwalk during rough seas (he was not performing any assigned duties) when he was struck by a wave and thrown against the catwalk chain railing. As a result, he suffered injuries to his neck and shoulders, and was unable to stand his next two watches.

Decision. This example should be considered a work injury and included in the work injury rates. Whereas paragraph 3.2.1 determines the number of manhours which should be counted for employees on shipboard, the standard provides for including injuries which arise out of and in the course of employment, and the example cited arose out of a hazard of the workplace to which the employee was exposed because of his employment.

Case 671 (2.3.1.2)

An employee suffered slight visual impairment due to an accident, resulting in visual acuity of 20/25 in his right eye which was slightly less than normal. This was apparently directly traceable to the corneal injury, and represented a 1.1 percent loss in relation to the "normal" visual efficiency of both eyes. The company asked what number of days should be charged to this permanent partial disability.

Decision. The time charged for this injury should be 66 days. The committee accepted the 1.1 percent loss evaluation as being correct, and applied this percentage to the time charge for total loss of vision (total disability)—6,000 days.

Case 672 (2.3.1.2)

A company had a number of cases where an employee had been awarded a percentage of loss of hearing even though there was no time lost from work. For instance, an employee was awarded 20 percent loss of hearing, and the company asked to what it should apply the 20 percent.

Decision. These cases should not be counted in the rates. In accordance with the specific exception shown in paragraph 2.3.1.2, cases of partial loss of hearing are not counted as permanent partial disabilities.

Case 673 (4.6.1)

On January 20 an employee reported to the Medical Department with a lame wrist, was seen by the doctor, and was treated for a sprain. A week later he was again seen by the doctor who at this time noted there was a slight contracture of the right hand, a condition caused by continually holding the hand in a grasping position with the fingers curled, and developing over a long period of time. Until five months previously the employee had for some years operated a semi-automatic lathe with a long handle to open and close the chuck. This required considerable effort to operate, and caused various difficulties over the years. The company agreed that the employee's condition was probably caused by this handle, but questioned on what date to charge the injury.

Decision. The injury should be charged as of January 20, the date the injury was first reported.

NEW STANDARD AIMS FOR INTERCHANGEABILITY AND PERFORMANCE OF X-RAY TERMINALS

by T. H. ROGERS

DURING THE PAST TWENTY YEARS, the design of x-ray apparatus for medical diagnostic use has evolved into a pattern whereby the x-ray tube is separately enclosed in a so-called "shockproof" housing that is mounted in connection with the table or vertical panel on which the subject is positioned.

This tube unit is interconnected with the source of high-voltage power (frequently in excess of 100,000 volts) by means of heavily insulated and shielded "shockproof" cables. Thus, these shockproof cables can be likened to the household appliance cord which is detachable from the appliance and arranged for plug-in to a convenience outlet. However, these cables are quite heavy, frequently are 25 feet or greater in length, and sometimes are permanently installed in raceways or conduits. The terminals and the sockets into which they are plugged must be designed to withstand the voltages at which the x-ray apparatus operates. Conventionally, the apparatus is center-grounded so that the positive and negative voltages, respectively, at each terminal are approximately one-half of the total voltage of the equipment.

Both the x-ray tube and the cables are subject to more or less frequent replacement, being expendable items. Hence, for prompt servicing in case of either tube or cable breakdown, the plug-in termination of the cable has been designed to permit reasonably quick and easy connect and disconnect.

During the years of evolution of this pattern in x-ray apparatus design, a number of different companies designed different styles of cable termination arrangements and corresponding sockets.

Eventually, it became apparent that both users and manufacturers of x-ray apparatus would benefit from a standardization of such terminals, so that replacement cables and tubes from various sources of manufacture could be used interchangeably.

The necessity for such standardization became most pressing in connection with Government agencies who had procured x-ray apparatus and such components as tubes and cables from various manufacturers and had encountered intolerable difficulties due to lack of such standardization when attempting to interchange tubes and cables on various installations.

The result was the promulgation of Federal Standard No. 72, covering a preferred type of termination, which was thenceforth made a requirement in connection with Federal Government purchases of X-ray apparatus. Federal Standard No. 72 was originally issued under date of November 16, 1954.

As issued, this standard covered only dimensional aspects necessary for interchangeability of cable terminals and receptacles.

Late in 1954, the General Services Administration of the Federal Government submitted a proposal to the American Standards Association that its Federal Standard No. 72 be approved as American Standard. In connection with processing this request, an ASA Committee, C86, was established under joint sponsorship of the National Electrical Manufacturers Association and the General Services Administration.

In the deliberations of Committee C86, proposals were introduced, particularly by members representing the manufacturing industry, that electrical qualifications as well as dimensional aspects should be covered by such a standard. After very thorough exploration of such considerations, additions to the original Federal Standard No. 72 were promulgated by the committee, resulting in the inclusion of performance requirements under two headings:

1. Design Acceptance Tests
2. Routine Tests

These requirements were classified with respect to the maximum voltage ratings for which such cables are to be used; namely, 62.5 peak kilovolts (pkv) and 75 pkv, respectively. These two classes cover x-ray apparatus having maximum voltage ratings of 125 and 150 peak kilovolts, respectively. For details of the performance requirements and the dimensional features of the standardized terminal and receptacle, refer to the newly published American Standard Specification for Shockproof Terminals and Receptacles for Use on X-ray Equipment, C86.1-1958. Copies can be obtained at 35 cents each.

MR ROGERS, director of engineering, Machlett Laboratories, Springdale, Connecticut, is chairman of ASA Sectional Committee C86 on Shockproof Cable Terminals and Receptacles for X-ray Equipment. The committee is sponsored by the General Services Administration and the National Electrical Manufacturers Association.

Members of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. Titles are given here in English, but documents are in the language of the country from which they were received. An asterisk * indicates that the standard is available in English as well. For the convenience of readers, the standards are listed under their general UDC classifications. In ordering copies of standards, please refer to the number following the title.

STANDARDS FROM OTHER COUNTRIES

615.4 PRACTICAL PHARMACY. MEDICINES. INSTRUMENTS. HOSPITAL EQUIPMENT

India (ISI)

BHC dusting powders IS:561
BHC water dispersible powder concentrates IS:562

Sweden (SIS)

Screw-top glass medicine bottles CSB 162
4 stds for different stainless steel hospital kitchenware CSB 277/280

United Kingdom (BSI)

Interchangeable fittings for cystoscopic instruments BS 3038:1959
Rampley's sponge holding forceps BS 3039:1959
Latex foam rubber hospital mattresses BS 3093:1959
Small incinerators for the destruction of hospital dressings BS 3107:1959
General purpose trolleys for anesthetists' use BS 3112:1959

621.82 TRANSMISSION SYSTEMS AND PARTS

Czechoslovakia (CSN)

4 stds for knuckle joints CSN 30 1550/3

Japan (JISC)

Plummer blocks for ball and roller bearings JIS B 1551

621.89 LUBRICATION

Belgium (IBN)

Acidity and alcalinity of greases NBN 52.060

Germany (DNA)

2 stds for determination of demand and consumption of lubricants DIN 51500
Lubricants for big gas machines DIN 51508
SAE classes of viscosity for motor lubricating oils DIN 51511
Determination of flashpoint in open crucible (Marcusson Method) DIN 51584
Testing of lubricants: reaction to water DIN 51807

Hungary (MSZH)

Lubricating oil for tractors MSZ 13155-57

621.9 TOOLS. MACHINE TOOLS. MACHINING

Belgium (IBN)

Boring of milling cutters and driving systems of milling cutters by key or by tong NBN 125
Metric tapers 5 percent and Morse tapers for tools NBN 405
Hand reamers with straight shank NBN 485
Drills with Morse tapers and reinforced Morse tapers shanks NBN 488
Drills with straight shank NBN 494
Spacing rings for milling cutters bearing shafts NBN 495
Files and rasps NBN 496
Adjustable adaptors for tools with Morse tapers NBN 497

Czechoslovakia (CSN)

Reamers, straight with taper shank CSN 22 2198

Italy (UNI)

5 stds for different types of broaches UNI 4116/20
21 stds for different types of carpenter's, mechanic's, ironsmith's, etc. hand hammers UNI 4122/42

Japan (JISC)

Milling cutter for involute gear JIS B 4232
Countersinks drill, combination JIS B 4304
Pneumatic drill JIS B 4902
Four-jaw chuck JIS B 6154
Tapping drills, sizes JIS B 4305
Pliers JIS B 4614
Radio pliers JIS B 4631
6 stds for socket wrenches and accessories JIS B 4636/41
Pipe cutters JIS B 4646

Poland

4 stds for twist drills, with different shanks PN M-59551, -59641, -50643, -59645

United Kingdom (BSI)

Circular gear shaving cutters: accuracy BS 2007:1959
Adjustable hand reamers with inserted blades BS 3088:1959

USSR

6 stds for nuts with hand lever for machine tools, details GOST 8919-58
2 stds for flat and round feelers for machine tools GOST 8925/6-58
Cross planers, testing for accuracy GOST 16-59
Boundary dimensions of standard longitudinal planers GOST 439-59
Three-side milling cutters GOST 3755-59
Slot milling cutters GOST 3964-59
End milling cutters with taper shank GOST 4675-59
End milling cutters for wood GOST 8994-59
Grinding tables with horizontal shaft, boundary dimensions of GOST 9033-59

665.4/.5 MINERAL OILS. WAXES

Austria (ONA)

Flash point test in open crucible according to Marcusson ONORM C 1123
Flash point test according to Pensky-Martens ONORM C 1122
Neutralization number of mineral oils ONORM C 1146
Saponification index of mineral oils ONORM C 1147

France (AFNOR)

Petroleum: determination of flash point by Pensky-Martens apparatus NF M 07-019
Petroleum: determination of sulfur content (quartz tube method) NF T 60-108

Spain (IRATRA)

Sampling of bituminous products UNE 41095

USSR

Photo-electro-colorimetric method for determination of color of mineral oil products GOST 8933-58

674 WOOD INDUSTRY

Australia (SAA)

Sawn house stumps, sole plates, fence posts and struts from Southeastern Australian hardwoods O 70-1958

Canada (CSA)

Specification for yard lumber O 141-1959

Czechoslovakia (CSN)

Compressed saw-dust boards CSN 49 2615

India (ISI)

Code of practice for seasoning of timber IS:1141
Glossary of terms applicable to timber, plywood and joinery IS:707

Ireland (IIRS)

Moisture content of softwood timber for building I.S. 96

Italy (UNI)

Flexion testing of wooden panels UNI 3745
Determination of modulus of elasticity of wooden panels UNI 3746
5 stds for different methods for physical testing of wood UNI 4143/7

New Zealand (NZSI)

Standard specification for the kiln-drying of timber NZSS 632:1958

Sweden (SIS)

Impregnated wood SIS 52 62 10

Union of South Africa (SABS)

Standard spec for wooden handles for beater picks, mattocks and picks SABS 268-1957
Standard spec for wooden handles for hammers SABS 292-1958
Standard spec for agricultural box shooks and box boards SABS 452-1956
Standard spec for wooden handles for axes SABS 573-1958

United Kingdom (BSI)

Structural timber, Measurement of characteristics affecting strength: Softwood BS 1860:Part 1:1959

677 TEXTILE AND CORDAGE INDUSTRY

India (ISI)

Handloom cotton nainsook, bleached or dyed IS:1240
Handloom cotton calico, bleached or dyed IS:1241
Handloom cotton shirting, bleached, dyed, striped, checked or printed IS:1242
Handloom cotton coating, bleached, dyed, striped or checked IS:1243
Handloom cotton longcloth, bleached or dyed IS:1244
Handloom cotton pyjama cloth, grey, with stripes IS:1245
Handloom cotton curtain cloth, bleached, dyed, striped, checked or printed IS:1246
Handloom cotton madras check IS:1247
Handloom woolen tweed IS:1265
Handloom serge IS:1266
Handloom worsted raffal shawls IS:1267

Netherlands (HCNN)

Textile dyes: red and blue for flags NEN 3055
Textile dyes: orange for flags NEN 3203

Spain (IRATRA)

Coconut cordage UNE 27053
Determination of extracts from wool tops, soluble in ether UNE 40033
Method for separating the materials added to textile fibers during their manufacture UNE 40053

Sweden (SIS)

Sealing strips of woven textile fabric SIS 52 86 01
Determination of tensile strength of skeins yarn SIS 65 00 39
Determination of rupture load of woven fabrics using a rubber diaphragm SIS 65 00 41
Determination of rupture load of woven fabrics using a metal ball SIS 65 00 42

Union of South Africa (SABS)

Standard spec for denim SABS 600-1958

United Kingdom (BSI)

Yarn count systems and conversions BS 947:1959
Cotton fiber maturity test BS 3085:1959
Method for determining the fluidity of linen materials in cuprammonium hydroxide solution BS 3090:1959
Drafting rollers used in woolen and worsted yarn manufacture BS 3091:1959
Quantitative chemical analysis of mixtures of viscose rayon and cotton BS 3068:1959
Quantitative chemical analysis of binary mixtures of nylon 6 or nylon 6.6 and certain other fibers BS 3069:1959
Test for recovery of fabrics from creasing BS 3086:1959
Hessian sandbags and rot-proofed Hessian sandbags 1214:1959

USSR

Staple fiber for wool industry GOST 8947-58

77 PHOTOGRAPHY AND CINEMATOGRAPHY

Hungary (MSZH)

Flexible camera shutter release MSZ 9670-58

Japan (JISC)

Focal plane shutter JIS B 7126

USSR

Tripod connections, details GOST 3362-58
Metal containers for motion picture films GOST 4097-58

NEW BOOKS

HANDBOOK OF AUTOMATION, COMPUTATION, AND CONTROL. VOLUME I. CONTROL FUNDAMENTALS. *Edited by Eugene Grabbe,*[1] *Simon Ramo, and Dean E. Wooldridge First edition.* 1958. 6 *x* 9. 992 *pp. John Wiley & Sons, Inc,* 440 *Fourth Avenue, New York* 16, *N. Y.* $17.00.

Review by S. P. Kaidanovsky

The Handbook will consist of three volumes. Volume 1 is on control fundamentals; Volume 2 is concerned with computers and data processing; and Volume 3 with systems and components.

The Handbook is directed toward what the editors call "problem solvers — the engineers, scientists, technicians, managers, and others from all walks of life who are concerned with applying technology to the mushrooming developments in automatic equipment and systems." The Handbook will also serve as a source of information for practicing engineers and will provide management with a frame of reference and background material for understanding modern techniques of importance to business and industry.

Volume 1, Control Fundamentals, consists of 26 chapters, contributed by 29 experts in their respective fields. Thirteen chapters deal with general mathematics, including sets and relations, Boolean algebra, probability and statistics. Additional chapters are devoted to numerical analysis, information theory, and operations research.[2] The present status of feedback control theory is summarized in eight chapters. Letter symbols and nomenclature for feedback control and an alphabetical index for definitions of terms in feedback control are patterned after the American Standard Letter Symbols for Feedback Control Systems, Y10.13-1955.

A good background in mathematics is expected from the reader. Volume 1 covers the subject of control fundamentals thoroughly and has a strong treatment of general mathematics covering aspects not usually available in engineering handbooks.

[1] In addition to the present book Dr Grabbe has edited and contributed to "Automation in Business and Industry," (Wiley 1957), reviewed in the July 1957 issue of THE MAGAZINE OF STANDARDS, page 209.

[2] The chapter on operations research by Leonard Arnoff is based on "Introduction to Operations Research," by C. West Churchmann, Russell A. Ackoff, and Leonard Arnoff (Wiley 1957), reviewed in the August 1957 issue of THE MAGAZINE OF STANDARDS, page 246.

INTERNATIONAL ELECTROTECHNICAL VOCABULARY, GROUP 70: ELECTROBIOLOGY. *IEC Publication* 50 (70). 1959. *Second edition.* $2.40. Contains some 110 terms and definitions in French and English, together with the equivalent terms in German, Spanish, Italian, Polish, and Swedish. Indexes are provided for each of the seven languages. Terms and definitions are divided into the following sections: General terms, biological, electrotherapeutic, kinds of current, and apparatus.

STANDARDIZATION—A MUST FOR THE SPACE AGE. Proceedings of the SES Seventh Annual National Meeting. September 1958. 8½ *x* 11 *in.* 89*pp. Heavy paper cover. Standards Engineers Society,* 1025 *Connecticut Ave., N.W., Washington* 6, *D. C.* $5.00 *for nonmembers;* $4.00 *for members.* Twenty-three papers presented at the Standards Engineers Society's 1958 annual meeting describe how to achieve the savings that standardization makes possible, provided standards advance as technology advances. The papers are published with charts and illustrations. Subjects include ways of utilizing manpower effectively, materials for the space age, advances in engineering practices, education in standardization, and standardization in Canada. Among the outstanding papers are the following: Standardization of Non-Metallics in Missile Use, *J. L. Woodward,* Non-Metallic Engineering Unit Supervisor, Chrysler Corporation; Metals for the Space Age, *R. L. Sproat,* Chief Metallurgist, Standard Pressed Steel Company; Training in Industry for Standards Engineering, *J. Gaillard,* Consultant; An Electronic Processing System and Standardization, *M. Macchia,* Analysis and Programming Group Supervisor, Radio Corporation of America, and Standardization in the Canadian Aircraft Industry, *M. A. Phipps,* Chief of Design Service Engineering, Orenda Engines, Ltd.

News Briefs . . .

• THE 1959 INDEX to standards published by the French Standards Association (AFNOR), lists 4700 active French standards. It contains 418 pages, as compared with 375 pages in the previous edition. Copies have been received by the American Standards Association. The price of the French catalog is $4.00 per copy.

• THE PROGRAM being developed for the Standards Engineers Society's Eighth Annual Meeting in Boston, September 21 and 22, 1959, consists of an integrated series of events.

According to an announcement by Richard G. Munroe, the Eighth Committee's General Chairman and SES national vice-president, a varied program is planned. Some of the speakers who will appear at the two-day meeting include top level representatives from the nation's major industrial organizations, military experts of international prominence, and outstanding leaders in the standards field. Among them are Dr Ivan A. Getting, vice-president, Engineering & Research, Raytheon Company; Miles Rowan, editor-in-chief, *Modern Materials Handling;* and Cyril Ainsworth, deputy managing director of the American Standards Association.

A series of special conferences—buzz sessions — is being scheduled, which will include a plan for rotation among the groups for maximum discussion. This makes it possible for groups to move from table to table at specified intervals to provide two-way communication with a variety of specialists. These technical sessions are expected to help those wishing to talk over problems with many leaders in the standards fields, Mr Munroe points out.

The Program Committee is urging those attending the meeting to arrive during the weekend preceding (either Friday or Saturday, September 18 or 19), to take advantage of the opportunity to visit the large variety of places and events which make Boston, and Massachusetts, a tourist's mecca.

Wives of SES members are urged to attend with their husbands—not only to gain first-hand knowledge of latest developments in standards but also to enjoy activities designed especially for them.

Women are invited to the Monday morning session which features an outstanding keynote speaker, a top level representative of a leading industrial organization, and a specialist who will discuss the relationship of consumer goods and standards. A grand tour of Massachusetts' historical attractions is scheduled after lunch. On the second day, Tuesday, the women may be guided, on request, by Boston Section hostesses who will suggest a list of unique trips and sites to satisfy a wide gamut of interests. Tuesday's lunch is planned to be held in a converted sailmaker's loft overlooking Boston Harbor. A noted speaker will be on hand to describe the harbor sites.

The Commonwealth of Massachusetts

STANDARDS ENGINEERS WEEK

His Excellency Foster Furcolo, Governor of the Commonwealth of Massachusetts, signs the proclamation making the week of September 20 to 26 Standards Engineers Week. With Governor Furcolo are officials of the Standards Engineers Society which is holding its eighth annual meeting in Boston in September. Left to right: Professor Leo B. Moore, Massachusetts Institute of Technology, adviser to the SES committee; Richard G. Munroe, general chairman, eighth annual meeting committee and SES vice-president; Governor Furcolo; Charles T. Ajamian, annual meeting publicity chairman; Arnold M. Rosenwald, SES Boston Section chairman.

news briefs . . . continued

• THE JOINT SUBCOMMITTEE on Radiation Effects of ASTM Committee D-9 on Electrical Insulating Materials and ASTM Committee D-20 on Plastics has recommended the use of the rad as a national standard unit for reporting radiation dose. The rad, which represents 100 ergs of energy absorbed per gram of material, is independent of the kind of ionizing radiation (x-rays, gamma rays, beta rays, neutrons, etc), as well as of the type of material being irradiated, the American Society for Testing Materials points out in announcing the committee's recommendation. In this respect the rad differs from most other units currently in use for measuring radiation intensity and radiation effects. For example, the well-known roentgen unit applies only to x- and gamma radiation absorbed by air.

In order to use the roentgen as a unit for measuring exposure to radiation of materials or tissues other than air it has been found expedient to use a modified unit such as the rep (roentgen equivalent physical), ASTM explains. The rep was originally defined as the dose of any nuclear or ionizing radiation resulting in the absorption of 93 ergs per gram of tissue. The energy equivalent of the rep has been changed in recent years to 98 ergs per gram because of more accurate measurements.

In recommending the use of the rad as the standard radiation dose unit, the committee is recognizing what was expected in 1953 by the International Commission on Radiographic Units when it adopted the rad as a new unit of absorbed radiation dose. It was expected then that the rad would eventually supersede the rep which has been widely used in reporting radiation dosage. This action of the committee to recommend a national standard unit, if widely followed, will improve communications among those reporting results of experiments on radiation effects, according to the ASTM announcement.

• R. C. SOGGE, president of the U.S. National Committee of the International Electrotechnical Commission, received the honorary degree of Doctor of Engineering from Ohio Northern University, Ada, Ohio, at graduation ceremonies June 14.

The honor was extended to Dr Sogge, an alumnus of Ohio Northern, for his extensive work on technical and industry standards, both national and international.

In addition to the presidency of the U.S. National Committee of IEC, a position he has held since 1953, Dr Sogge is vice-chairman of the National Electrical Manufacturers Association's codes and standards committee. The U.S. National Committee of IEC is an arm of the American Standards Association. Dr Sogge has been active in ASA work for many years. He heads the U.S. delegation of 42 representatives at the IEC meetings being held in Madrid, Spain, during July.

Dr Sogge is consultant, industry standards, General Electric Company.

In addition to the LL.B. degree from Ohio Northern University, Dr Sogge has received an LL.M. degree from John Marshall School of Law. He is a licensed professional engineer, and a Fellow of the American Institute of Electrical Engineers and the Standards Engineers Society.

Use of IEC Publications as common electrical standards is among the benefits expected by the six nations forming the European Common Market, Dr Sogge reported recently following a meeting in Paris of the President's Preparatory Committee, to which he was appointed by the newly elected president of the IEC.

France, Germany, Italy, Belgium, the Netherlands, and Luxembourg are working together for the development of the common market, and their IEC representatives expect that common standards will be one of the means of development, according to Dr Sogge. The common market countries have a total population equal to that of the United States.

The representatives of neighboring countries, which are not in the common market, expressed some concern and indicated the desirability of including more countries in the program, Dr Sogge added. If the standards adopted by the common market nations differ from those of the IEC or of other nations, these other nations may experience some difficulty in selling their products in the common market.

"It was reported that each of the six countries involved would endeavor to follow IEC standards to the maximum extent," Dr Sogge said, "but that where deviations were necessary, an effort would be made to have the same deviations apply to each of the six countries."

Other subjects covered at the Paris meeting were efforts to provide IEC standards that would enable under-developed nations to purchase equipment to best advantage, the possibility of standardization in the field of digital computers and data processing machines, and the administrative problems posed by the fact that the work of the IEC has doubled every three and a half years.

"In view of the importance of international standards to growing economies of both industrial and underdeveloped nations," Dr Sogge stated, "I believe it is vital to U.S. industry's economic well-being to participate more actively in this field."

• DR WALTER A. SHEWHART, the "father of modern quality control," whose writings were the basis for the American Standards on quality control, will be a speaker at the Fourteenth Midwest Quality Control Conference, September 14-16, 1959. The conference is being held at the French Lick-Sheraton Hotel, French Lick, Indiana. The program will include 21 presentations by outstanding speakers on the applications of statistical techniques to management, industrial and design engineering, inventory control, reliability, and life testing, as well as other areas of general interest.

Basic and advanced courses in quality control will be offered. A Ladies Program has been planned.

Requests for additional information should be directed to: C. R.

Heimlich, supervisor of quality engineering, Cummins Engine Company, Columbus, Indiana.

• THE INTERNATIONAL Organization for Standardization (ISO) is circulating for comment Draft Recommendation No. 282 for the outside diameters of plastic pipe for the transport of liquids. Copies of this recommendation are available to interested groups through ASA. The United Kingdom has objected to this recommendation on the grounds that the dimensions proposed in the standard make the pipe suitable only for slip-on joints. It precludes cutting screw threads that would allow interchangeability of the plastic pipe with steel pipe.

• THE INTERNATIONAL Organization for Standardization has formally appointed Vice Admiral G. F. Hussey, Jr (USN Ret), managing director of the American Standards Association, as its representative to the Economic and Social Council of the United Nations. C. F. Frost, secretary of ASA's Materials and Testing Standards Board, has been named alternate representative.

• COLOR CARDS produced to meet the specifications of the American Standard Color Code for Marking Physical Hazards and the Identification of Certain Equipment, Z53.1-1953, are being offered for sale by the Munsell Color Company. Samples of all eight of the safety colors specified in the standard are being offered. A copy of the standard will be included with each set.

American Standard Z53.1-1953 specifies the use of the following colors and defines the exact technical limitations of each color:

Red identifies fire protection equipment and apparatus, warns of danger, or indicates "stop."

Orange designates dangerous parts of machines or energized equipment which may cut, crush, shock, or otherwise injure employees working with the machine.

Yellow is the basic color for designating "caution" and for warning against physical hazards that an employee might strike against or that might cause him to stumble, fall, or trip.

Green is the basic color for designating "safety." It indicates the location of first aid equipment and other safety equipment, such as safety bulletin boards, gas masks, first aid kits, stretchers, and safety deluge showers.

Blue is used only to warn against starting, using, or moving equipment under repair.

Purple identifies radiation hazards.

Black and white are the basic colors for traffic and housekeeping markings, such as traffic aisles where no danger exists, and storage locations.

The new Munsell color cards offer physical samples made to meet the technical limitations of these colors as defined in American Standard Z53.1-1953.

Copies of American Standard Z53.1-1953 can be obtained from the American Standards Association at 50 cents.

The color samples, including a copy of the standard, can be obtained from the Munsell Color Company, Inc, 10 East Franklin Street, Baltimore 2, Maryland, at $10.00.

• THE GUIDE for Loading Oil-Immersed Distribution and Power Transformers, C57.92, an appendix to the C57.12 series of American Standards on power and distribution transformers, has been revised and was published in April. The new guide is available from ASA at $2.00 per copy.

Published to facilitate the use of the American Standard, but not a part of the standard, it covers general recommendations for loading all types of oil-immersed transformers, except water-cooled transformers built before 1929.

The transformers covered by the guide may use either oil or synthetic fluids in combination with cellulose insulations. Such transformers are usually specified to have an average rise of not more than 55 C and hottest-spot winding rise of not more than 65 C at rated load.

The guide suggests that for recommendations on water-cooled transformers built before 1929, the manufacturer be consulted.

The C57.12 series of standards, to which the guide is an appendix, covers requirements, terminology, and test code for distribution, power, and regulating transformers, and reactors other than current-limiting reactors. It is available in six volumes from ASA, at a total price of $10.40.

• First prize in the Students' Educational Contest sponsored by the National Association of Purchasing Agents was awarded this year for a paper entitled "The Need for Standardization." Robert J. Power, a student at City College of New York, won the prize. In his conclusion, Mr Power said:

"New samples of successful standardization programs are constantly coming to light. In far too many instances where standardization programs do not exist, the reason is simply that there has been a complete lack of thought on the subject. In other cases, the problem of who should make the decision to standardize is the only retarding factor. In any case, where standardization could be effectively applied and has not been so applied, great fortunes are sifting through the hands of industry like grains of sand to be lost forever. The fundamental responsibility for standardization rests with those who make the decisions as to the kind, cost, and quality of the company's product. Those who fail to make the decision to standardize when they are able to do so, fail in the responsibility entrusted to them. The organizations that need standardization programs most are the very ones that do not have them."

• THE BRITISH Standards Institution has grown too big to house all its activities in its relatively new headquarters building in London. It was only five years ago that BSI moved into the building known as British Standards House, which it owns. Now, the growth of certification marking of products meeting the requirements of British Standards has presented the Institution with an urgent need for more test facilities. As a result, BSI is building new laboratories and offices at Hemel Hempstead where some of the testing under the certification schemes will be carried out.

The building has been designed by Bruce Martin, the architect who heads the Modular Coordination Studies Section at BSI. Mr Martin has designed the building as a contribution to the international project on modular building organized by the European Productivity Agency.

AMERICAN STANDARDS

If your company is a member of the American Standards Association, you are entitled to receive membership service copies of these newly published American Standards. Find out who your ASA contact is in your company. Order your American Standards through him. He will make sure your company receives the membership service to which it is entitled.

Just Published

BUILDING AND CONSTRUCTION

Gypsum Plasters, Specifications for, ASTM C 28-58; ASA A49.3-1959 (Revision of ASTM C 28-57; ASA A49.3-1958) $0.30

Sponsor: American Society for Testing Materials

Gypsum Wallboard, Specifications for, ASTM C 36-58; ASA A69.1-1959 (Revision of ASTM C 36-55; ASA A69.1-1956) $0.30

Sponsor: American Society for Testing Materials

CHEMICAL

Raw Linseed Oil, Tentative Specifications for, ASTM D 234-58; ASA K34.1-1959 (Revision of ASTM D 234-55; ASA K34.1-1956) $0.30

Sponsor: American Society for Testing Materials

Boiled Linseed Oil, Tentative Specifications for, ASTM D 260-58; ASA K35.1-1959 (Revision of ASTM D 260-55; ASA K35.1-1956) $0.30

Sponsor: American Society for Testing Materials

ELECTRIC AND ELECTRONIC

Pool-Cathode Mercury-Arc Power Converters, C34.1-1958 (Revision of C34.1-1949) $1.40

Sponsor: American Institute of Electrical Engineers

Automatic Circuit Reclosers and Automatic Line Sectionalizers for Alternating-Current Systems, Requirements for, C37.22-1959 $1.35

Ratings, manufacturing and testing standards, service conditions, and definitions for devices used for automatically interrupting, isolating, and reclosing an alternating-current circuit of nominal voltages from 1,500 to 23,000 volts.

Sponsor: Electrical Standards Board

MECHANICAL

Unified Miniature Screw Threads, B1.10-1958 $1.50

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Load Ratings for Ball and Roller Bearings, Method of Evaluating, B3.11-1959 $1.75

Sponsor: Mechanical Standards Board

Addenda to American Standard Double-Pitch Conveyor Roller Chains, Attachments and Sprockets, B29.4a-1958 (Addenda to B29.4-1954) *no charge*

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

METALLURGY

Structural Rivet Steel, Specifications for, ASTM A 141-58; ASA G21.1-1959 (Revision of ASTM A 141-55; ASA G21.1-1956) $0.50

Sponsor: American Society for Testing Materials

Structural Steel for Locomotives and Cars, Specifications for, ASTM A 113-58; ASA G39.1-1959 (Revision of ASTM A 113-56; ASA G39.1-1957) $0.50

Sponsor: American Society for Testing Materials

Mild- to Medium-Strength Carbon-Steel Castings for General Application, Specifications for, ASTM A 27-58; ASA G50.1-1959 (Revision of ASTM A 27-57; ASA G50.1-1958) $0.30

Sponsor: American Society for Testing Materials

High-Strength Steel Castings for Structural Purposes, Specifications for, ASTM A 148-58; ASA G52.1-1959 (Revision of ASTM A 148-57; ASA G52.1-1958) $0.30

Sponsor: American Society for Testing Materials

Free-Cutting Brass Rod, Bar, and Shapes for Use in Screw Machines, Specifications for, ASTM B 16-58; ASA H8.1-1959 (Revision of ASTM B 16-52; ASA H8.1-1953) $0.50

Sponsor: American Society for Testing Materials

Rolled-Copper-Alloy Bearing and Expansion Plates and Sheets for Bridge and Other Structural Uses, Specifications for, ASTM B 100-58; ASA H31.1-1959 (Revision of ASTM B 100-55; ASA H31.1-1956) $0.30

Sponsor: American Society for Testing Materials

Leaded Red Brass (Hardware Bronze) Rod, Bar, and Shapes, Specifications for, ASTM B 140-58; ASA H33.1-1959 (Revision of ASTM B 140-54; ASA H33.1-1954) $0.50

Sponsor: American Society for Testing Materials

MISCELLANEOUS

Guide for Quality Control, Z1.1-1958 (Revision of Z1.1-1941)

Control Chart Method of Analyzing Data, Z1.2-1958 (Revision of Z1.2-1941) *In one volume* $2.25

Control Chart Method of Controlling Quality During Production, Z1.3-1958 (Revision of Z1.3-1942) $2.50

Sponsor: American Society for Quality Control

Indexes, Basic Criteria for, Z39.4-1959 $0.80

Basic criteria for indexing books, periodicals, and other documentary materials. Includes a definition of an index and standards covering the nature, organization, and style of an index and observations about indexing procedure generally.

Sponsor: Council of National Library Associations

PHOTOGRAPHY

Diffuse Reflection Density, PH2.17-1958 $0.80

Sponsor: Photographic Standards Board

Photographic Filing Enclosures for Storing Processed Photographic Films, Plates, and Papers, Requirements for, PH4.20-1958 (Revision of Z38.8.21-1950) $0.60

Sponsor: Photographic Standards Board

PIPE AND FITTINGS

Petroleum Refinery Piping, B31.3-1959 (Partial revision of Section 3 of Code for Pressure Piping, B31.1-1955) $4.00

Oil Transportation Piping, B31.4-1959 (Partial revision of Section 4 of Code for Pressure Piping, B31.1-1955) $2.50

Sponsor: American Society of Mechanical Engineers

Forged or Rolled Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service, Specifications for, ASTM A 105-58T; ASA G17.3-1959 (Revision of ASTM A 105-57T; ASA G17.3-1958) $0.30

Sponsor: American Society for Testing Materials

TEXTILES

Spun and Filament Yarns Made Wholly or in Part of Man-Made Organic Base Fibers, Methods of Testing, ASTM D 1380-57T; ASA L14.90-1959 (Revision of ASTM D 1380-56T; ASA L14.90-1957) $0.50

Sponsors: American Society for Testing Materials; American Association of Textile Chemists and Colorists

WOOD AND WOOD PRESERVATIVES

Testing Small Clear Specimens of Timber, ASTM D 143-52; ASA O4.1-1958 (Revision of ASTM D 143-27; ASA O4a-1927) $0.60

Sponsor: American Society for Testing Materials

AMERICAN STANDARDS UNDER WAY

Status as of June 22, 1959

AUTOMOTIVE

In Standards Board

Specific Gravity of Concentrated Engine Antifreezes by the Hydrometer, Method of Test for, ASTM D 1122-58; ASA D14.3- (Revision of ASTM D 1122-53; ASA D14.3-1955)
Sponsor: American Society for Testing Materials

BUILDING AND CONSTRUCTION

In Standards Board

Fireclay and High-Alumina Refractory Brick, Classification of, ASTM C 27-58T; ASA A111.5- (Revision of ASTM C 27-41; ASA A111.5-1956)

Basic Procedure in Panel Spalling Test for Refractory Brick, Method for, ASTM C 38-58; ASA A111.6- (Revision of ASTM C 38-52; ASA A111.6-1955)
Sponsor: American Society for Testing Materials

Areas in Hospitals and Related Facilities, Method of Determining, Z65.4-
Sponsors: National Association of Building Owners and Managers; Office of Education, Department of Health, Education and Welfare

CHEMICAL

In Standards Board

Turpentine, Methods of Sampling and Testing, ASTM D 233-58; ASA K33.1- (Revision of ASTM D 233-36; ASA K33-1937)
Sponsor: American Society for Testing Materials

CONSUMER GOODS

In Standards Board

Alkaline Detergents, Methods of Sampling and Chemical Analysis of, ASTM D 501-58; ASA K60.21- (Revision of ASTM D 501-57; ASA K60.21-1958)
Sponsor: American Society for Testing Materials

DRAWINGS, SYMBOLS AND ABBREVIATIONS

In Standards Board

Letter Symbols for Feedback Control Systems, Y10.13-
Sponsor: American Society of Mechanical Engineers

ELECTRIC AND ELECTRONIC

American Standards Approved

Soft Rectangular and Square Bare Copper Wire for Electrical Conductors, Specifications for, ASTM B 48-58; ASA C7.9-1959 (Revision of ASTM B 48-57; ASA C7.9-1958)

Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Members for Electrical Conductors, Specifications for, ASTM B 172-58; ASA C7.12-1959 (Revision of ASTM B 172-55; ASA C7.12-1953)

Rope-Lay-Stranded Copper Conductors Having Concentric-Lay-Stranded Members for Electrical Conductors, Specifications for, ASTM B 173-58; ASA C7.13-1959 (Revision of ASTM B 173-55; ASA C7.13-1953)

Bunch-Stranded Copper Conductors for Electrical Conductors, Specifications for, ASTM B 174-58; ASA C7.14-1959 (Revision of ASTM B 174-53T; ASA C7.14-1953)

Concentric - Lay - Stranded Aluminum Conductors, Hard-Drawn Three-Quarters Hard-Drawn and Half-Hard-Drawn, Specifications for, ASTM B 231-58; ASA C7.21-1959 (Revision of ASTM B 231-57; ASA C7.21-1958)

Concentric-Lay-Stranded Aluminum Conductors, Steel-Reinforced (ACSR), Tentative Specifications for, ASTM B 232-58; ASA C7.22-1959 (Revision of ASTM B 232-57T; ASA C7.22-1958)

Resistivity of Electrical Conductor Materials, Method of Test for, ASTM B 193-58; ASA C7.24-1959 (Revision of ASTM B 193-57; ASA C7.24-1958)

Copper Bus Bar, Rod and Shapes, Specifications for, ASTM B 187-58; ASA C7.25-1959 (Revision of ASTM B 187-55; ASA C7.25-1957)

Seamless Copper Bus Pipe and Tube, Specifications for, ASTM B 188-58; ASA C7.26-1959 (Revision of ASTM B 188-56; ASA C7.26-1957)

Standard Weight Zinc-Coated (Galvanized) Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR), Specifications for, ASTM B 245-58; ASA C7.28-1959 (Revision of ASTM B 245-55; ASA C7.28-1956)

Zinc-Coated (Galvanized) Steel Core Wire (With Coatings Heavier Than Standard Weight) for Aluminum Conductors, Steel Reinforced (ACSR), Specifications for, ASTM B 261-58; ASA C7.34-1959 (Revision of ASTM B 261-55; ASA C7.34-1956)
Sponsor: American Society for Testing Materials

Interference Output of Television Receivers in the Range of 300 to 10,000 kc, Methods of Measurement, C16.25b-1959 (Supplement to C16.25-1955)
Sponsor: Institute of Radio Engineers

In Board of Review

Measurement of Direct Interelectrode Capacitance, C60.6- (Revision of C60.6-1952)
Sponsor: Joint Electron Device Engineering Council

In Standards Board

Definitions of Electrical Terms: Group 45—Electromechanical Devices, C42.45- (Partial revision of C42-1941)
Sponsor: American Institute of Electrical Engineers

Rigid Steel Conduit, Zinc Coated, Specification for, C80.1- (Revision of C80.1-1953)

Rigid Steel Conduit, Enameled, Specification for, C80.2- (Revision of C80.2-1953)

Electrical Metallic Tubing, Zinc Coated, Specification for, C80.3- [Revision of C80.3-1950 (R 1953)]
Sponsors: American Iron and Steel Institute; National Electrical Manufacturers Association

American Standard Withdrawn

Loudspeaker Testing, C16.4-1942
Sponsor: Institute of Radio Engineers

GAS-BURNING APPLIANCES

In Standards Board

Domestic Gas Ranges, Volume I, Free Standing Units, Z21.1.1- (Revision of Z21.1-1956, Z21.1a-1957, Z21.1b-1958)

Domestic Gas Ranges, Volume II, Built-In Domestic Cooking Units, Z21.1.2- (Revision of Z21.1.2-1956, Z21.2a-1957, Z21.1.2b-1958)

Hotel and Restaurant Gas Ranges and Unit Broilers, Z21.3b- (Addenda to Z21.3-1956, Z21.3a-1957)

Domestic Gas Clothes Dryers, Z21.5- (Revision of Z21.5-1956, Z21.5a-1957, Z21.5b-1958)

Domestic Gas-Fired Incinerators, Z21.6b- (Addenda to Z21.6-1957, Z21.6a-1958)

Hot Plates and Laundry Stoves, Z21.9- (Revision of Z21.9-1948, Z21.9a-1949)

Gas Water Heaters, Volume I, Z21.10.1- (Revision of Z21.10.1-1956, Z21.10.1a-1957, Z21.10.1b-1958)

Gas Water Heaters, Volume II, Side-Arm Type Water Heaters, Z21.10.2- (Revision of Z21.10.2-1956, Z21.10.2a-1957, Z21.10.2b-1958)

Gas-Fired Room Heaters, Z21.11- (Revision of Z21.11-1956, Z21.11a-1957, Z21.11b-1958)

Central Heating Gas Appliances, Volume I, Steam and Hot Water Boilers, Z21.13.1a- (Addenda to Z21.13.1-1958)

Central Heating Gas Appliances, Volume II, Gravity and Forced Air Central Furnaces, Z21.13.2a- (Addenda to Z21.13.2-1958)

Central Heating Gas Appliances, Volume III, Gravity and Fan Type Floor Furnaces, Z21.13.3- (Revision of Z21.13.3-1956), Z21.13.3a-1957, Z21.13b-1958)

Central Heating Gas Appliances, Volume IV, Gravity and Fan Type Vented Recessed Heaters, Z21.13.4a- (Addenda to Z21.13.4-1958)

Manually Operated Gas Valves, Z21.15a- (Addenda to Z21.15-1958)

Gas Unit Heaters, Z21.16b- (Addenda to Z21.16-1957, Z21.16a-1958)

Domestic Gas Conversion Burners, Z21.17a- (Addenda to Z21.17-1958)

Metal Connectors for Gas Appliances, Z21.24b- (Addenda to Z21.24-1955, Z21.24a-1956)

Hotel and Restaurant Gas Deep Fat Fryers, Z21.27- (Revision of Z21.27-1955, Z21.27a-1956, Z21.27b-1957)

Portable Gas Baking and Roasting Ovens, Z21.28b- (Addenda to Z21.28-1956, Z21.28a-1957)

Installation of Gas Piping and Gas Appliances, Z21.30- (Revision of Z21.30-1954)

Gas Counter Appliances, Z21.31b- (Addenda to Z21.31-1956, Z21.31a-1957)

Gas-Fired Duct Furnaces, Z21.34a- (Addenda to Z21.34-1958)

Gas-Fired Absorption Summer Air Conditioning Appliances, Z21.40-

Sponsor: American Gas Association

MECHANICAL

In Standards Board

Taps—Cut and Ground Threads, B5.4- (Revision of B5.4-1948)

Sponsors: American Society of Mechanical Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers; American Society of Tool Engineers

Throw-Away Carbide Inserts, Specifications for, B80.1-

Sponsor: Cemented Carbide Producers Association

Reaffirmation Being Considered

Chucks and Chuck Jaws, B5.8-1954

Sponsors: American Society of Tool Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers; American Society of Mechanical Engineers

METALLIC COATINGS

In Standards Board

Electrodeposited Coatings of Nickel and Chromium on Steel, Specifications for, ASTM A 166-58T; ASA G53.3- (Revision of ASTM A 166-55T; ASA G53.3-1956)

Electrodeposited Coatings of Nickel and Chromium on Copper and Copper-Base Alloys, Specifications for, ASTM B 141-58; ASA G53.4- (Revision of ASTM B 141-55; ASA G53.4-1956)

Electrodeposited Coatings of Nickel and Chromium on Zinc and Zinc-Base Alloys, Specifications for, ASTM B 142-58; ASA G53.5- (Revision of ASTM B 142-55; ASA G53.5-1956)

Sponsor: American Society for Testing Materials

METALLURGY

In Standards Board

Zinc-Coated (Galvanized) Iron or Steel Sheets, Coils, and Cut Lengths, Specifications for, ASTM A 93-58T; ASA G8.2- (Revision of ASTM A 93-55T; ASA G8.2-1956)

Sponsor: American Society for Testing Materials

Slab Zinc (Spelter), Specifications for, ASTM B 6-58; ASA H24.1- (Revision of ASTM B 6-49; ASA H24.1-1949)

Sponsor: American Society for Testing Materials

MISCELLANEOUS

In Standards Board

ASTM Thermometers, Specifications for, ASTM E 1-58; ASA Z71.1- (Revision of ASTM E 1-57; ASA Z71.1-1958)

Sponsor: American Society for Testing Materials

Reaffirmation Approved

Reference Data and Arrangement of Periodicals, Z39.1-1943 (R 1959)

Sponsor: Council of National Library Associations

PHOTOGRAPHY

In Board of Review

Dimensional Change Characteristics of Photographic Films and Papers, Methods for Determining, PH1.32-

Sponsor: Photographic Standards Board

Back Window Location for Roll Film Cameras, PH3.1- (Revision of PH3.1-1952)

Method for Determining Performance Characteristics of Front Shutters Used in Still Cameras, PH3.4- (Revision of PH3.4-1952)

Attachment Threads for Lens Accessories, Specifications for, PH3.12- (Revision of PH3.12-1953)

Exposure-Time Markings for Shutters Used in Still Cameras, PH3.32- (Revision of PH3.3-1952 and PH3.5-1952)

Aperture Markings for Still Camera Lens, PH3.33- (Revision of Z38.4.7-1950)

Projectors for Opaque Materials, Specifications for, PH3.34- (Revision of Z38.7.4-1944)

Sponsor: Photographic Standards Board

Withdrawal Being Considered

Flash Synchronizing Equipment, Bipost Type, Z38.4.26-1951

Flash Synchronizing Equipment, Bayonet Type, Z38.4.27-1951)

Sponsor: Photographic Standards Board

PIPE AND FITTINGS

In Standards Board

Seamless Carbon-Steel Pipe for High-Temperature Service, Specifications for, ASTM A 106-58T; ASA B36.3- (Revision of ASTM A 106-55T; ASA B36.3-1956)

Electric-Fusion (Arc) Welded Steel Pipe (Sizes 4 in. and Over), Specifications for, ASTM A 139-58T; ASA B36.9- (Revision of ASTM A 139-55; ASA B36.9-1956)

Seamless Steel Boiler Tubes, Specifications for, ASTM A 83-58T; ASA B36.12- (Revision of ASTM A 83-56T; ASA B36.12-1958)

Electric-Resistance-Welded Steel and Open-Hearth Iron Boiler Tubes, Specifications for, ASTM A 178-58T; ASA B36.13- (Revision of ASTM A 178-56T; ASA B36.13-1958)

Medium-Carbon Seamless Steel Boiler and Superheater Tubes, Specifications for, ASTM A 210-58T; ASA B36.15- (Revision of ASTM A 210-55T; ASA B36.15-1956)

Welded and Seamless Open-Hearth Iron Pipe, Specifications for, ASTM A 253-58; ASA B36.23- (Revision of ASTM A 253-55T; ASA B36.23-1956)

Seamless Low-Carbon and Carbon-Molybdenum Steel Still Tubes for Refinery Service, Specifications for, ASTM A 161-58T; ASA B36.27- (Revision of ASTM A 161-55T; ASA B36.27-1956)

Seamless Cold-Drawn Low-Carbon Steel Heat-Exchanger and Condenser Tubes, Specifications for, ASTM A 179-58T; ASA B36.28- (Revision of ASTM A 179-56T; ASA B36.28-1958)

Seamless Cold-Drawn Intermediate Steel Heat-Exchanger and Condenser Tubes, Specifications for, ASTM A 199-58T; ASA B36.29- (Revision of ASTM A 199-56T; ASA B36.29-1958)

Seamless Intermediate Alloy-Steel Still Tubes for Refinery Service, Specifications for, ASTM A 200-58T; ASA B36.30- (Revision of ASTM A 200-55T; ASA B36.30-1956)

Seamless Carbon-Molybdenum Alloy-Steel Boiler and Superheater Tubes, Specifications for, ASTM A 209-58T; ASA B36.31- (Revision of ASTM A 209-55T; ASA B36.31-1956)

Electric-Resistance-Welded Steel Heat-Exchanger and Condenser Tubes, Specifications for, ASTM A 214-58T; ASA B36.32- (Revision of ASTM A 214-56T; ASA B36.32-1958)

Electric-Resistance-Welded Carbon-Molybdenum Alloy-Steel Boiler and Superheater Tubes, Specifications for, ASTM A 250-58T; ASA B36.34- (Revision of ASTM A 250-55T; ASA B36.34-1956)

Seamless and Welded Steel Pipe for Low-Temperature Service, Specifications for, ASTM A 333-58T; ASA B36.40- (Revision of ASTM A 333-55T; ASA B36.40-1956)

Seamless and Welded Steel Tubers for Low-Temperature Service, Specifications for, ASTM A 334-58T; ASA B36.41- (Revision of ASTM A 334-55T; ASA B36.41-1956)

Nickel Seamless Pipe and Tube, Specification for, ASTM B 161-58T; ASA H34.1- (Revision of ASTM B 161-49T; ASA H34.1-1955)

Nickel-Copper Alloy Seamless Pipe and Tube, Specification for, ASTM B 165-58T; ASA H34.2- (Revision of ASTM B 165-49T; ASA H34.2-1955)

Nickel-Chromium-Iron Alloy Seamless Pipe and Tube, Specification for, ASTM B 167-58T; ASA H34.3- (Revision of ASTM B 167-49T; ASA H34.3-1955)

Sponsor: American Society for Testing Materials

RUBBER

In Standards Board

Sample Preparation for Physical Testing of Rubber Products, Methods of, ASTM D 15-58T; ASA J1.1- (Revision of ASTM D 15-57T; ASA J1.1-1958)

Sponsor: American Society for Testing Materials

SAFETY

Reaffirmation Being Considered

Recording and Measuring Work Injury Experience, Method of, Z16.1-1954

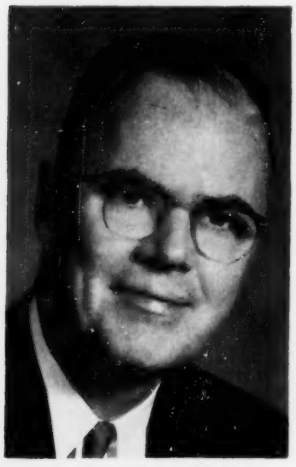
Sponsors: National Safety Council; Association of Casualty and Surety Companies, Accident Prevention Dept.

NEWS ABOUT AMERICAN STANDARDS PROJECTS

Gas-Burning Appliances, Z21—

Sponsor: American Gas Association

New work took a step forward at the annual meeting of Sectional Committee Z21 held in Cleveland in March. The committee approved a new standard covering summer air-conditioning appliances, and approved a broadly expanded revision of the American Standard Installation of Gas Piping and Gas Appliances in Buildings, Z21.30-1954. The new edition will include undiluted liquefied petroleum gases which previously were excluded.



Robert I. Snyder

The committee worked in close coordination with the Liquefied Petroleum Gas Association, the National Board of Fire Underwriters, and the National Fire Protection Association, and as a result the NFPA and NBFU standards covering installations using undiluted liquefied petroleum gases have been withdrawn. The standard has also been broadened to include gas piping systems extending from the outlet of the meter set assembly, or the service regulator when a meter is not provided, to the inlet connections of appliances. This means that "in Buildings" will be dropped from the title. As a result, the committee has approved a broadened scope for its work to be submitted to the American Standards Association for approval.

Subcommittees are working on performance requirements for gas appliances installed in mobile homes and out-of-doors locations. These include central heating, water heaters, gas ranges, room heaters, and clothes dryers for mobile homes, and water heaters, incinerators, and air conditioners for installation outdoors.

Two new subcommittees were authorized. One will develop performance requirements to ensure safe and satisfactory performance of gas lights which have recently been reintroduced as a popular decorative outdoor lighting. The other will develop performance requirements for packaged commercial incinerators used in apartment houses, supermarkets, and similar places.

"The provisions of the American Standards for gas appliances and accessories, as developed by this committee and its subcommittees, form the yardstick by which the products of over 600 gas equipment manufacturers are evaluated under the gas industry's 34-year-old appliance Approval Program as administered by the AGA Laboratories," explains Robert I. Snyder, new chairman of Committee Z21. "Manufacturers whose products fully meet the provisions of the applicable American Standard upon examination and tests are then authorized to display the AGA Laboratories Seal of Approval."

Mr Snyder is vice-president in charge of distribution and customer service of the Southern California Gas Company. He has been on the company's staff since 1935. Mr Snyder is active in the work of the Pacific Coast Gas Association, the American Gas Association, American Management Association, and the American Society of Mechanical Engineers.

Library Work and Documentation, Z39—

Sponsor: Council of National Library Associations

As the amount of technical information continues to mushroom, the use of machines for information retrieval becomes of wide general interest. Recognizing the importance to libraries and library users of nationally approved standards for coding and indexing such information, Committee Z39 has decided to set up a subcommittee on coding and indexing systems.

The committee has appointed Robert E. Kingery, New York Public Library, and Z39 committee chairman, to represent it at the International Conference for Standards on a Common Language for Machine Searching and Translation to be held at Western Reserve University Center for Documentation, September 9-12. Mr Kingery will also represent the American Standards Association at this international conference.

At the invitation of the Illuminating Engineering Society, the committee plans to cooperate in work to develop new standards for library lighting.

In view of the fact that some differences have been found in various systems of proof correction symbols, the subcommittee on this subject will continue its work. Karl Brown, editor of the *Bulletin of the New York Library Association,* succeeds Dale Baker, *Chemical Abstracts,* as chairman of the subcommittee.

James L. Wood, The Ohio State University, succeeds Harold Oatfield in the chairmanship of the Subcommittee on Abbreviations for Periodicals.

Other Z39 subcommittees are: Abstracts and Synopses — Anne McCann, Squibb Institute for Medical Research, chairman; Layout of Periodicals—Ivan A. Given, editor, *Coal Age,* chairman; Indexing—Anne J. Richter, R. R. Bowker Co, chairman; Library Statistics—Henry J. Dubester, Library of Congress, and Marion Bonniwell, Department of the Navy, Bureau of Ships, co-chairmen; Terminology — Jerrold Orne, University of North Carolina, chairman; Transliteration—C. Sumner Spalding, Library of Congress, chairman.

Anesthetic Equipment, Z79—

Sponsor: American Society of Anesthesiologists, Inc

Officers of the committee hope to bring order out of the present rather confused welter of noninterchangeable anesthesia equipment manufactured in this country and abroad. Dr Hamilton S. Davis, chairman of Committee Z79, outlines his views on the subject as follows: "We are aiming to standardize certain items which are used daily by anesthesiologists throughout the country with the hope that ultimately national standards may be incorporated into international standards. Endotracheal tubes are all but completed. Connectors, adaptors, and orifice size are now receiving detailed study.

Dr Hamilton S. Davis

"This equipment is not restricted to administration of anesthesia but is a vital part of all programs of lifesaving and resuscitation in this country and elsewhere. Since the world is growing smaller every day, it is only logical that an attempt be made to correlate essential items in this field on an international basis.

"We have been quite close to our colleagues in Britain and are making good progress toward reaching standards acceptable to both countries. A group of our Z79 membership met with the similar group of the British Standards Institution last July in London. The British then reciprocated by sending a similar team to our meeting in New York City in December 1958. Our meeting this June in Atlantic City, while not attended by British professional or productive men, maintained the desired liaison through the attendance of Dr Gloss, deputy technical director of the BSI. We hope to again welcome a strong British delegation at our October meeting in Miami."

Dr Vincent J. Collins

Dr Davis is associate professor of Anesthesia, Western Reserve University, as well as director of the Department of Anesthesia, University Hospitals of Cleveland. He is also attending anesthesiologist at the Cleveland City Hospital. A member of numerous professional societies, he is a Fellow of the American College of Anesthesiologists and chairman of the Committee on Equipment and Standardization, American Society of Anesthesiologists.

Dr Vincent J. Collins, president-elect, New York State Society of Anesthesiologists, is vice-chairman of Committee Z79. He is also associate professor of Anesthesiology at NYU-Bellevue Medical Center and serves as delegate to the American Society of Anesthesiologists and the Medical Society of the State of New York as well as secretary of the Section on Anesthesiology of

Dr Henry E. Kretchmer

the American Medical Association.

Dr Henry E. Kretchmer, director of the Department of Anesthesia, Cleveland Metropolitan General Hospital, is secretary of the committee. Dr Kretchmer also serves as anesthesiologist in two Cleveland hospitals and is associate professor of Anesthesiology at the Western Reserve University. A member of five medical societies, he is a Fellow of the American College of Anesthesiologists and of the Royal Society of Medicine (England). He is chairman of the Subcommittee on Standardization of Anesthetic Equipment of the American Society of Anesthesiologists.

All three committee officers have greatly contributed to medical literature and have co-authored many publications in the medical field.

J. M. Bryant

Identification System for Anti-Friction Bearings, B54—

Sponsor: Anti-Friction Bearing Manufacturers Association

"During the year 1957 this committee gave tentative approval to a code for identifying bearings that have been standardized by ASA and ISO. During the ISO/TC 4 meetings at Naples in 1958 this code was accepted unanimously. This places an obligation on the B54 committee to formally approve and publicize the tentatively approved code. There will be quite a number of additional bearings covered in the American Standard to take care of inch series bearings that as yet have not been standardized by ISO."

This was reported by J. M. Bryant, recently appointed chairman of Sectional Committee B54. Mr Bryant is chief engineer of the Ball and Roller Bearing Plant, Link-Belt Company. He holds the chairmanship of Working Group I of ISO/TC 4 and the AFBMA Committee on Identification Code for Ball and Roller Bearings. Mr Bryant is a life member of the American Society of Mechanical Engineers, and a member of the Indiana Society of Professional Engineers as well as the National Society of Professional Engineers. He is the author of numerous articles on mechanical power transmission and holds a number of U.S. patents.

Performance Requirements for Protective Occupational Footwear, Z41—

Sponsors: National Safety Council; Association of Casualty and Surety Companies, Accident Prevention Department

Commenting on the committee's plans, Les Dutton, newly elected secretary of Z41, states: "The existing Z41 code is a series of American War Standard Specifications for Protective Occupational Footwear in five sub-categories. It dates back to 1943 and was produced in consideration of materials then available under war time conditions. Demand has been increasing for up-dating the code to take into account newer materials and methods of construction. The code committee is now being reactivated to bring about the necessary revisions."

Mr Dutton joined the National Safety Council in 1945, serving successively as safety engineer, senior engineer, and senior consulting engineer. He is a representative of the Council staff for the Railroad and Marine Section and is active in research work on personal protective equipment and other safety subjects.

Les Dutton

Positive Displacement Metering

On recommendation of the President's Advisory Committee on Standardization, the American Petroleum Institute's revised standard 1101, on positive displacement metering, was submitted recently to the American Standards Association. The submittal requested ASA to take the necessary steps either for approval of the code as American Standard or for initiation of a project to develop an American Standard using the code as a basis. To determine what action should be taken, ASA called a general conference, which met June 17. The conference agreed that the subject was suitable for consideration under ASA procedure. However, on the question of how the subject should be handled, either by an existing committee or by a sectional committee organized for the purpose, the conference was divided evenly. Therefore, the question has been referred to the ASA Mechanical Standards Board and the Materials and Testing Standards Board for a decision.

Work on the standard submitted by API started in a research project undertaken in 1941 by the Special Research Committee on Fluid Meters of the American Society of Mechanical Engineers to determine the accuracy of positive displacement meters. The American Petroleum Institute joined with ASME in conducting this research. Following completion of the research work, the ASME-API Code for Installation, Proving, and Operation of Positive Displacement Meters in Liquid Hydrocarbon Service, identified as API Code No. 1101, was prepared. The first edition appeared in July 1946. A revised edition was printed in January 1952.

With the formation of a centralized fluid quantity measurements committee within API, ASME agreed to discontinue its code-writing activities on positive displacement metering. The request for ASA approval follows revision of the code by the API Positive Displacement Metering Measurement Committee.

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Program chairman is Roy P. Trowbridge, director of engineering standards, General Motors Corporation.